JANUARY, 1952

Industrial FINISHING

Published Monthly in the Interest of Product Cleaning and Finishing by Industrial Publications, Inc., 1213 N. Meridian Street, Indianapolis 4, Ind.

The Best Finishing Resolution for You In 1952 . . .

I will let the Lilly "Key" solve my finishing problems all year long, so that — "With the right finish—I'll finish right."

THE Lilly FINISHES

VARNISH COMPANY

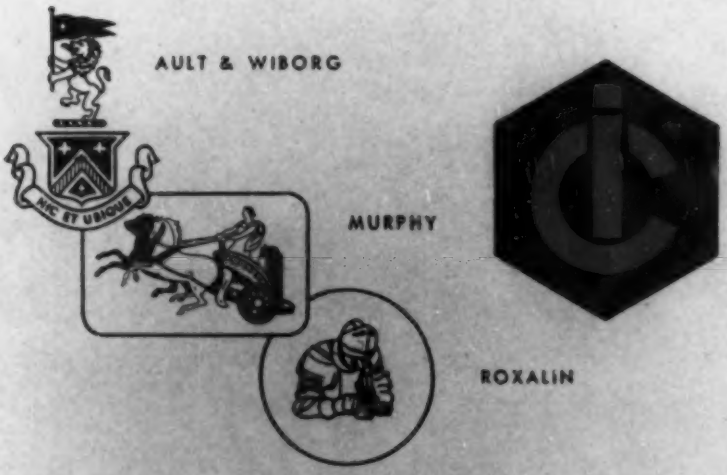
Indianapolis, Indiana • Gardner, Mass.

THE LILLY COMPANY • High Point, N. C.

Interchemical Finishes

UNDERCOATS, VARNISHES, LACQUERS,
ENAMELS for METAL, PLASTIC, WOOD

To give your product a good start, give it an Interchemical Finish!



MAIN OFFICE: 350 FIFTH AVENUE, NEW YORK, N. Y.
FACTORIES: ELIZABETH, CINCINNATI, CHICAGO, LOS ANGELES

Ault and Wiborg, Murphy, Roxalin and IC are trademarks of Interchemical Corporation.

Check How BEDE PAINT HEATERS Cut FINISHING COSTS!

BEDE PAINT HEATERS

★ First Choice Among Leading Manufacturers

Turn finishing waste into profits! With the amazing hot-spray method, using Bede Heaters, you get higher quality finishes. You cut loss from rejects. Faster production permits more jobs without costly additions of equipment. You save paint waste and cut thinner bills more than half.

Bede Paint Heaters are quickly and easily installed in any finishing operation. They require no major changes or additional equipment. Paint temperature and viscosity are thermostatically controlled by heating elements housed in cast aluminum. Proved by thousands of installations, there is a Bede model best suited to every industrial finishing requirement.

★ **SOMETHING NEW!**

• A list of users in many lines of manufacturing. Yours for the asking!

WRITE OR WIRE FOR ILLUSTRATED BULLETINS

BEDE PRODUCTS Inc.

INDUSTRIAL FINISHING SPECIALTIES

4311-B RIDGE ROAD • CLEVELAND 9, OHIO

Sign OF FINISHES DESIGNED TO Sell

Leading makers are displaying this sign with their showroom showings. It distinguishes finishes designed *to sell* . . . finishes created to compliment the beauty of the wood and the beauty of the design with inherent qualities that insure enduring customer satisfaction.

The Better the Finish, the Better the Buy

GRAND RAPIDS VARNISH CORPORATION

GRAND RAPIDS, MICHIGAN

Makers of the Famous Guardsman Finish and Guardsman Cleaning Polish

JANUARY, 1952
Vol. XXVIII, No. 3

CCA

A monthly magazine for finishing room and paint shop foremen, production superintendents, chemists, purchasing agents and company executives of industrial plants where production cleaning and finishing are major operations in the manufacture of parts and products.

Industrial FINISHING

W. H. ROHR, Editor **P. C. BARDIN, Associate Editor**

Contents

Random Comment on the Industrial Scene 4
Finishing Pease Blueprint Machines 24
Custom Finishing 32
Production Finishing of Metal Traverse Rods 40
Wet Blast Cleaning Jet Engine Parts 48
Finishing Room Troubles? Maybe It's You 54
The Theory and Practice of Finishing Furniture (Part IV, Lacquers, Varnishes, Enamels) 68
Questions & Answers 78
Letters from Readers 88
Materials; Supplies; Equipment 100
Editorial 120
"Classified Advertising" 126
Advertisers Index 128

Dip Tank Trouble? 28
Emil Spoerry, Jr. Named Executive V. P. of Arco Co. 30
M. J. Henry Now Sales Mgr. for United Lacquer 30
Burdett Expands Oven Building Facilitips 45
Screen Process Census-Survey is Being Made by SPPA 45
Conforming Matrix Adds Important Personnel 52
Heat is Necessary 59
Two Engineers Join L. A. Industrial Concerns 60
85% Human Failure Accidents 60
Polishing Plastic Parts 62
Hercules Synthetics News 62
Hot Spray Lacquer 66
Naz-Dar Appoints Secord As Chief Chemist 66
Hardesty Appointed Technical Consultant for Star Chem. 66
Safety In Colors 66
New Wet Blasting Machine 66
J. W. Ten Eyck Elected V. P. of Schaefer Varnish Co. 76
Monkhouse is Made V.P. of Shell Chemical Corp. 85
T. M. Stokes, V.P. in Charge of Sales for Robertson Co. 85
Used Steel Drums 99
Barker Chemical Co. Offices Now in New Building 124
Solvent Degreasing Sales Highest 124
Patching Wood Finishes; Free Book Offered 125
New Compounds Will Help Forestall Solvents Crisis 125
John R. Cromb, Jr., Joins Harrison Paint & Varnish Co. 125
Hot Spray Folder Free 126
Oakite Representative Receives Distinguished Service Award 126
Stainless Steel Coating 126

Acceptance under Section 34.64, P. L. & R., authorized

Published
the 10th of each month by
PRACTICAL PUBLICATIONS
incorporated
1142 N. Meridian St.
Indianapolis 4, Ind.
Telephone PLaza 6771

President.....W. H. Rohr
Vice-President.....E. A. Dosch
Sec.-Treas.....R. E. Salts

Eastern Representative:
C. A. LARSON
254 West 31st St.
New York 1, N. Y.
Phone: Longacre 4-4285
4-4286

West Coast Representatives:
SIMPSON-REILLY LTD.
Halliburton Building,
Los Angeles 17, Calif.
Telephone: Dunkirk 8-1179
814 Central Tower
San Francisco 3, Calif.
Telephone: Douglas 2-4994

Subscription Rates Per Year
U. S. and Possessions.....$3.00
Canada and Foreign Countries.....$5.00

28 TWENTY-EIGHTH YEAR OF PUBLICATION

Color, Beauty, Safety, Cleanliness. Dynamic coloring is a distinctive feature of the new Sterling Drill Grinder made by DcDonough Mfg. Co., Eau Claire, Wisc. Providing increased safety for the operator as well as improving the appearance of the machine, the new coloring is an example of the increasing trend toward utilization of color dynamics in machine shop equipment finishing.

According to the manufacturer, the body and motor guards of the grinder are finished light green. The drill holder and the inside of the wheel guards are buff. Easily cleaned and resistant to corrosion, the new finish will encourage operators to keep the machine in a spic and span condition.

* * *

Preventive Maintenance. Throughout American industry, there is a cry for more and more industrial equipment of all kinds. Long distance telephones hum; teletypes clack; and planes, trains and automobiles converge on suppliers' doorsteps with "expeditors" to plead the case for shipping their order first.

If a fraction of the money spent on these activities were put into a good preventive maintenance program for similar equipment now in the plant, gains in productivity might rival the work that could be done by a new piece of equipment.

Expensive? No. Need a lot of equipment? Hardly any for daily or weekly checks and adjustments. Just a wrench, screwdriver and other simple tools. For some adjustments though, you'd better call in manufacturer's service representative if you have limited facilities and equipment.

* * *

Concrete Block Sealer. Concrete and cinder-block walls can be sealed against penetrating dampness with a new paint based on Bakelite styrene emulsion which also is a protective and decorative outer coating. Sprayed, brushed, or rolled on in two coats, the paint closes up moisture-admitting pores in the walls and dries to a tough, long-wearing finish. In many housing project units the coating has been employed to protect interior wall decoration from dampness while decorating the exterior walls. It is also useful on commercial structures of cement or cinderblock where penetrating moisture tends to make produce spoil or machinery rust; available in a wide variety of colors.

* * *

Transportation Facilities. United States transportation facilities, which are drawing increased attention as factors in national defense, are the subject of a chart just released by Dun & Bradstreet, Inc.

The chart, "The U. S. Freight Carrying System, 1940 vs. 1950," shows the changes in carrying capacity and types of equipment for the various types of carriers in the decade be-

(Continued on page 7)

OUTSTANDING DOLAN PRODUCTS

NO. 1900 RUBBING OIL and CLEAN-UP POLISH

Eliminates haze or blush and produces a clear, clean, dust-free finish that will not finger-mark.

FASTAINS

Newest Standard Shades of red or brown Mahogany, Maple or Cherry Light or Dark Walnut, and matches for any and every desired finish.

LIGHT-FAST—NON-GRAIN RAISING—BRILLIANT—TRANSPARENT—NON-BLEEDING STAINS

LACQUER-TYPE FILLERS

RICH, FULL COLORS, LIGHT FAST, eliminate lifting, bleeding and greying.

LACQUERS

#1350 HI-SOLIDS (35%)
#2100 HOT-R-COLD (35%)
#2150 COMPANION Sealer
WATER-WHITE Lacquer

Also regular lines of highest quality 27% and 21% Lacquers

Sold with an absolute GUARANTEE OF SATISFACTION

V. J. DOLAN & COMPANY, INC.

"Unquestionable Quality"
INDUSTRIAL FINISHES

1830 N. Laramie Ave. Chicago 39, Ill.
BErkshire 7-0100

NEW BURDETT "AIR MAKE-UP" DEVELOPMENT

ASSURES CLEAN COMBUSTION WELL BELOW ALLOWABLE CO LIMITS

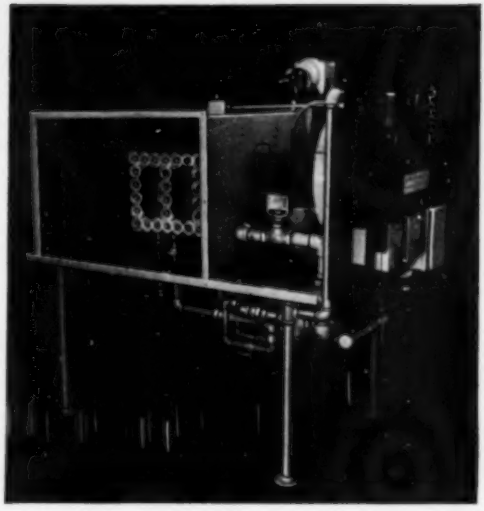
Resulting from long observations and research, this new Burdett "Air Make-Up" development corrects several major and costly spray-room difficulties. It constantly replaces air exhausted by spray-booth fans with pre-heated air.

This unit eliminates overloading of building heating systems and prevents dust, dirt and other manufacturing impurities from being drawn over freshly painted work from other parts of the plant, resulting in cleaner work and lower operating costs.

The Burdett Unit, equipped with the famous Burdett "Radiant-Heat" burners is capable of raising −10° F. air up to 80° F., assuring clean combustion and testing well below minimum allowable CO limits.

This new development is available in three sizes: 6,000 CFM; 12,000 CFM; and 24,000 CFM.

Ask for complete information and prices.



Also remember the famous Burdett "Radiant-Heat" principle for Burn-off, Dry off, Paint-drying, Food Processing and other heat processing applications for greatest economy and best results.

BURDETT
MANUFACTURING COMPANY
3425 West Madison St., Chicago 24, Illinois

OVENS AND "RADIANT HEAT" GAS BURNERS

tween 1940 and 1950. It points out that in 1950 the volume of traffic carried exceeded the 1940 level by about 44%. All carriers registered gains in volume of traffic carried over this ten-year period, with the railroads still getting the biggest slice of the percentage pie—nearly one-half.

The trend has been toward more intensive use of all means of transportation—more trucks per mile of highway, more locomotives per mile of track, more barrel capacity per mile of pipeline. Air transportation gained nearly ten times as much as freight carrying capacity with almost twice as many miles of established route.

The most notable shift in the railroad industry has been from steam power to diesel power which now provides over one-third the total engine capacity.

* * *

Salvage Useful Metal Parts. A growing shortage of critical materials, coupled with an urgent need to curb inflationary spending, has placed a new and stronger emphasis on conservation, according to Hooker Electrochemical Co., Niagara Falls, N. Y.

Many manufacturing and other industrial firms are finding it difficult if not impossible to replace used or corroded parts because of the expanding defense effort. In this connection, Hooker itself has salvaged in one year over $20,000 worth of materials, some of them irreplaceable, at a cost of approximately $3,000.

Through the use of Virgo Molten Cleaner, the company has completely cleaned an assortment of cast iron and steel flanges, nickel pipe and other miscellaneous pipe fittings and chemical equipment. In addition, 190 assorted nickel and alloy valves which previously had been rejected for repair by the

CLEANS FASTER
. . . Better for Brushes!

Dip any brush in a little Imperial Rapid Brush Cleaner, and the heaviest-caked paints start to dissolve instantly! Ready to use as it comes from the can—no mixing, no stirring, no overnight soaking. The bristles are left resilient and clean-as-new. Ideal for quick color changes. Imperial Brush Cleaner is safe for nylon as well as natural-bristle brushes. Order from your supplier.

Removing Problems?

We have a complete line of removers that meet practically every need. Consult us on any special problem.

WILSON-IMPERIAL COMPANY
125 Chestnut St., Newark 5, N. J.

Mail coupon for further information

WILSON-IMPERIAL COMPANY
125 Chestnut Street, Newark 5, N. J.
Please send me facts about Imperial Rapid Brush Cleaner.
We're also interested in stripping finishes from .....
.....
Name .....
Street .....
City ..... State .....

NITRO-STAN
Chemically-Resistant
BAKING FINISHES

Recommended
for
Laboratory Furniture
and
Equipment
●
Hospital Furniture
●
Dairy Equipment
Etc.
●
Unsurpassed Resistance
to
Acids, Alkalis
and Most
Organic Solvents
●
Inquiries Invited.

Standard Coating Corp.
467 Broad Avenue
RIDGEFIELD, N. J.

manufacturer, were processed and made acceptable for reconditioning. To date 132 of these valves have been returned to Hooker "factory reconditioned" at a cost of $1750. Replacement value of valves, at current prices, is $8588.

* * *

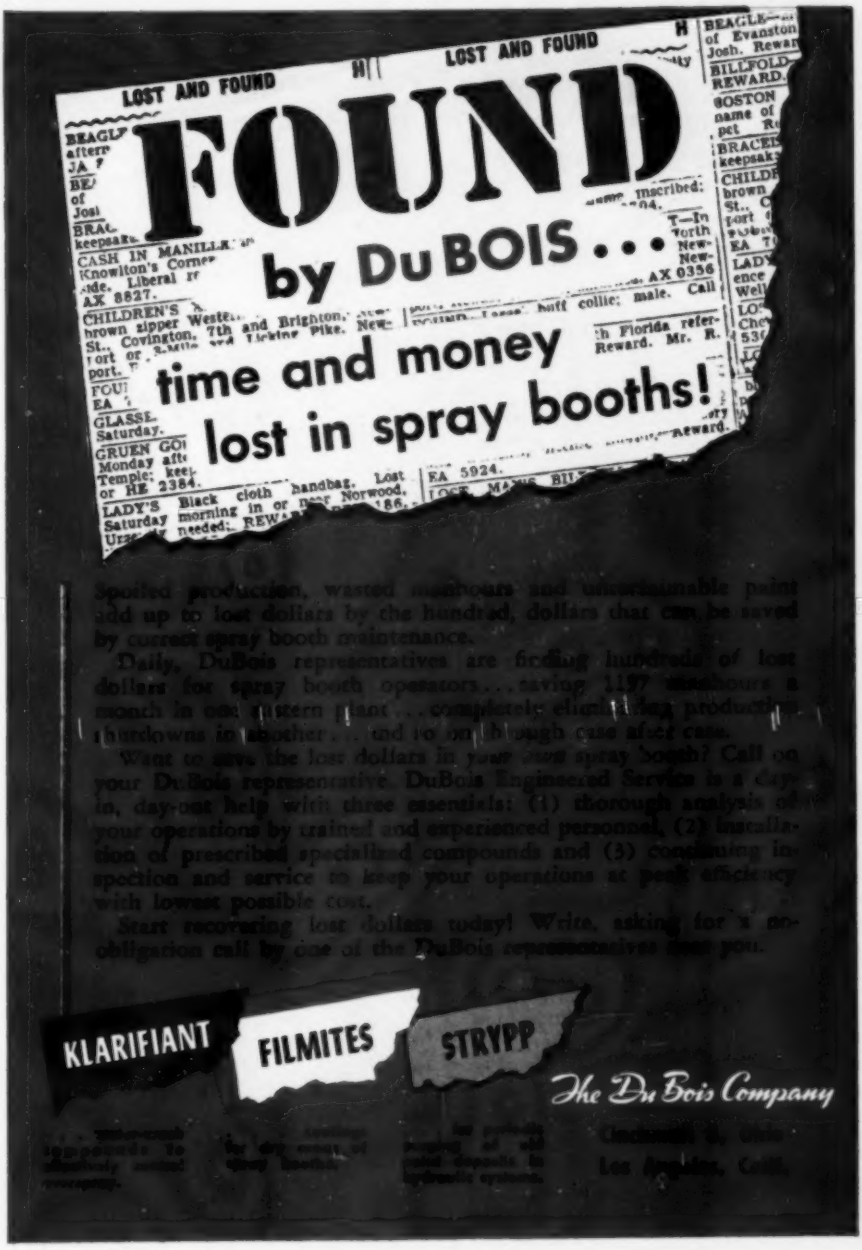
New Plasticizer. Expanded facilities for producing a plasticizer that is urgently needed for military and defense purposes will be constructed soon at its South Charleston, W. Va., plant, it is announced by Carbide and Carbon Chemicals Co., a Division of Union Carbide & Carbon Corporation.

The plasticizer, known as tri(2-ethylhexyl) phosphate or "Flexol" plasticizer TOF, is used in manufacturing many types of plastic and synthetic rubber products that are essential for military and defense purposes. It is the only material of its kind that provides good flexibility at low temperatures when incorporated in the plastic or rubber, and at the same time provides resistance to water, weather, and mildew. Vinyl plastics compounded with this plasticizer are fire-resistant.

* * *

Copper Clad Steel. A new method for producing copper clad steel was shown in a metallurgical laboratory in Cleveland, Ohio, recently. This process produces a bi-metal in which the copper is inseparably bonded to the steel and may be the timely answer to the almost desperate need of the civilian world for the material of 1000 uses—copper. This development is the result of research by W. L. Ulmer of the Automatic Gasflux Co. and the Superior Flux & Mfg. Co. of Cleveland. He has spent the last ten years in developing a process for producing bi-metal which makes possible the production of sheets 80% steel

(Continued on page 118)


LOST AND FOUND
FOUND
by DuBOIS . . .
time and money
lost in spray booths!
Spoiled production, wasted manhours and unrecoupable paint add up to lost dollars by the hundred, dollars that can be saved by correct spray booth maintenance.
Daily, DuBois representatives are finding hundreds of lost dollars for spray booth operators . . . saving 1197 manhours a month in one eastern plant . . . completely eliminating production shutdowns in another . . . and so on through case after case.
Want to save the lost dollars in your own spray booth? Call on your DuBois representative. DuBois Engineered Service is a day-in, day-out help with three essentials: (1) thorough analysis of your operations by trained and experienced personnel, (2) installation of prescribed specialized compounds and (3) continuing inspection and service to keep your operations at peak efficiency with lowest possible cost.
Start recovering lost dollars today! Write, asking for a no-obligation call by one of the DuBois representatives near you.
KLARIFIANT
FILMITES
STRYPP
The Du Bois Company

Sleds of many shapes and sizes are protected against the rigors of winter and Junior's persistent pounding by Tousey finishes.

Extremes in temperatures, the sharp contact with ice and hard packed snow and the constant maneuvering of the runners call for a paint of considerable flexibility. In addition a good sled finish must hold up during long months of summer storage. Such a finish is made by Tousey and successfully used by a leading manufacturer of sleds who knows . . . ***Tousey Finishes Can Take It!***

TOUSEY VARNISH COMPANY

520 W. 25th St., Chicago 16, Illinois

50th ANNIVERSARY
Prime and finish coat conveyorized ovens.
50th ANNIVERSARY
Exit of L-shaped 5-stage washer and entrance to dry-off oven.
DESPATCH
Engineered
FINISHING SYSTEMS
Modernize Metal Finishing at
HEINTZ MANUFACTURING CO.
For fifty years Despatch has pioneered and engineered better, more economical finishing systems for leading metal finishers throughout the country. Resident engineers located in your vicinity are ready to help you with your finishing problems.
50th ANNIVERSARY
Air replacement system showing air circulating fan and steam coils.
50th ANNIVERSARY
Exterior view of water wash spray booth.
50th ANNIVERSARY
Air make-up intake filters at rear of water wash spray booth.
FIFTIETH ANNIVERSARY
DESPATCH
OVEN COMPANY

How is a Doorknob like a Harrow?

In both, the finish must withstand the mark of time. Good finishes are good business for manufacturers, merchants, consumers.

ZAPON

"SERVICE FROM EVERY ANGLE"

ZAPON makes good finishes for every type of product. ZAPON "Service From Every Angle" starts with the development of the right formula . . . continues through to application of the final finish. ZAPON Finishes are "custom-tailored" for every job.

ATLAS POWDER COMPANY • WILMINGTON 99, DELAWARE

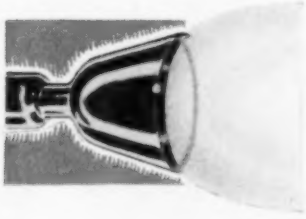
for Industrial Finishes • Stamford, Conn. • North Chicago, Ill.

RANSBURG SHOWS THE WAY TO NEW EFFICIENCIES IN *Electro-Spray* PAINTING

YES — 99% EFFICIENCY

is being obtained on many installations with the revolutionary, RANSBURG No. 2 PROCESS, and in some instances, *efficiency even EXCEEDS 99%*. On most production lines, the No. 2 Process will give 25% to 75% more pieces per gallon than ANY other spray finishing system. And the increase is much greater over conventional hand spray!

It isn't hearsay. Nor idle chatter! It isn't laboratory test talk. It's a proved fact. Proved on customers' production lines where the new RANSBURG No. 2 PROCESS is achieving new efficiencies never before attained in the field of spray finishing!



May we send you a copy of our brochure which describes the No. 2 Process in more detail . . . .

RANSBURG ELECTRO-COATING CORP.

Indianapolis 7, Indiana

RANSBURG

Twice the belt life

in backstand grinding!

Try one simple change in your present backstand set-up. Using the same backstand grinder, the same type of abrasive belt by CARBORUNDUM, remove the contact wheel and replace it with our new serrated rubber "61" wheel.

Put the machine back to work. See for yourself how stock removal rates go up, how much longer the belt cuts, how belt changes are reduced. Watch for a better finish, less fatigue from your operator. Best of all, check your abrasive costs. They may be as much as 50 per cent less. See your CARBORUNDUM representative or distributor about the new "61" wheel. Or write Dept. IF 82-127.

Only CARBORUNDUM
TRADE MARK

"Carborundum" is a registered trademark which indicates manufacture by The Carborundum Company, Niagara Falls, N. Y.

makes ALL Abrasive Products ...to give you the proper ONE

82-127

3-WAY HELP
on all finishing problems

1 Technical help on FINISHING METHODS

Do you spray, dip, flow-coat or all three? Sherwin-Williams' wide background of experience in all types of production finishing methods—including electrostatic, automatic and hot spray—may help you solve production problems, whether defense or civilian.

2 Specialized help on FINISHING MATERIALS

Sherwin-Williams Industrial Production Line Finishes include a complete line of primers, reducers and finish coats for air drying and baking, for wood and metal, especially designed to meet civilian production line requirements.

3 Industry-wide experience on FINISHING DEVELOPMENTS

Sherwin-Williams' broad experience in finishes and finishing systems for all types of products provides every industry the benefit of improvements in materials and techniques developed in other specialized fields.

Fit the PRODUCTION LINE *too!*

How well a finish for use on your defense contracts fits government specifications is only part of the problem. The other part is *how well it fits your existing facilities and production line set-up.*

Sherwin-Williams offers industry-wide experience on both counts, extending through two World Wars. In providing technical assistance in converting any portion of your production, with least possible modification in equipment, Sherwin-Williams offers the services of Industrial Finish Specialists with broad experience in both civilian and defense production finishing.

If you have any problems involving government specification finishes it will pay you to investigate. Call, wire or write. The Sherwin-Williams Co., General Industrial Div., Cleve., 1, Ohio. Industrial Zone Offices located in Philadelphia, Pa., Newark, N. J., Chicago, Ill., Cleveland, O., Grand Rapids, Mich., Atlanta, Ga., Dallas, Tex. and Oakland, Cal.

SHERWIN-WILLIAMS
INDUSTRIAL FINISHES
for defense production . . . for civilian production

FINISHING **PROCEDURES**

FINISHING **MATERIALS**

FINISHING **PROBLEMS**

24 pages of

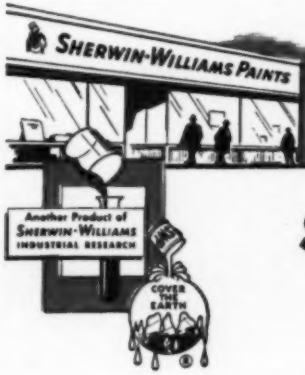
HELPFUL FACTS ON FINISHING

of furniture and wood products

Where and how can the various forms of stains be used to best advantage—powders, concentrates, ready-mixed dyes and pigmented wiping stains? What are the most successful methods of accomplishing bleaching . . . antiquing . . . special finishes?

These and many other questions are answered in this handy reference guide to the use of Sherwin-Williams Furniture Finishes. It contains application information covering the complete line of industrial quality furniture finishes available through Sherwin-Williams Branches in all principal cities . . . including stains, fillers, sealers and top coats, as well as typical schedules.

If your products or shop operations involve the use of wood finishes, you'll find helpful data in this brochure. Ask for a copy (Brochure F-501) from your local S-W Branch or write The Sherwin-Williams Co., General Industrial Division, Cleveland 1, Ohio.



PRODUCT FINISHES

SHERWIN-WILLIAMS

INDUSTRIAL FINISHES

Complete Finishing Systems

YOUNG & BERTKE SPRAY BOOTHS

The 32 years of Engineering Experience built into a Young & Bertke Finishing System is a MOST IMPORTANT cost to you. Progressive manufacturers . . . like EMPIRE IRONER COMPANY . . . must produce a fine finish . . . at lower cost . . . and therefore, selected a Young & Bertke Spray Booth because of its adaptability, efficiency, ease of operation, less power consumption on water curtain and exhaust, low-cost maintenance, effective washing ability and one-man operation.

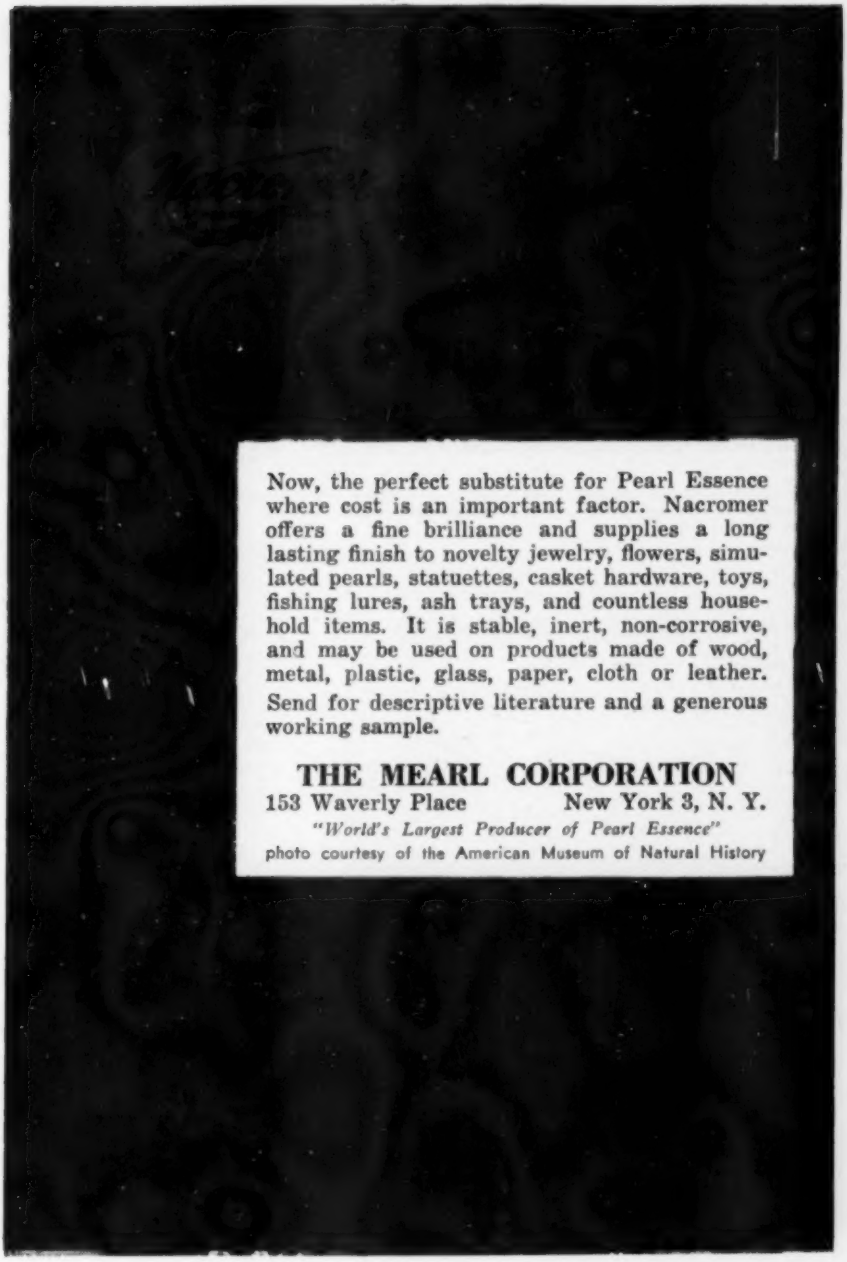
When you need a NEW FINISHING SYSTEM for Enamel, Lacquer or Paint, which must produce a finer finish . . . at lower cost . . . like that used on Empire Ironers . . . it will pay you to take advantage of the experience and know-how of Young & Bertke Engineers.

Write to Dept. 2250 for further information on all types of Spray Booths.

The YOUNG & BERTKE Co.

SPRAY BOOTHS • OVENS • DUST and FUME CONTROL

2250 BUCK ST. • CINCINNATI (14), OHIO



Now, the perfect substitute for Pearl Essence where cost is an important factor. Nacromer offers a fine brilliance and supplies a long lasting finish to novelty jewelry, flowers, simulated pearls, statuettes, casket hardware, toys, fishing lures, ash trays, and countless household items. It is stable, inert, non-corrosive, and may be used on products made of wood, metal, plastic, glass, paper, cloth or leather. Send for descriptive literature and a generous working sample.

THE MEARL CORPORATION

153 Waverly Place New York 3, N. Y.

"World's Largest Producer of Pearl Essence"

photo courtesy of the American Museum of Natural History

for volume finishing

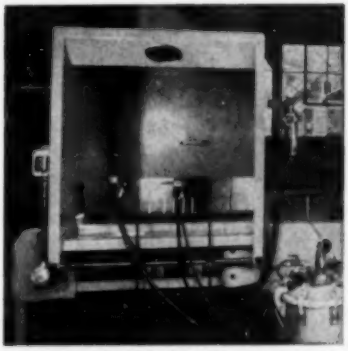
OF DEFENSE PARTS

CAPITOL HIGH SPEED

ELECTRIC SPRAY-BAKE

CONVEYOR MACHINE

It will accommodate pieces of from less than 1-in. diam. to over 12-in. diam., which require a high quality finish, such as shell noses, cartridges, weapon parts, also clocks, pens, pencils, door knobs, etc. Positioned on work holders, pieces are automatically sprayed, travel on through a drying chamber for solvent evaporation, and then into electric strip-heated bake oven from which they emerge for a cooling period before being removed.



View of booth showing automatic spray guns — lower view shows conveyor arrangement and drying and baking compartments.

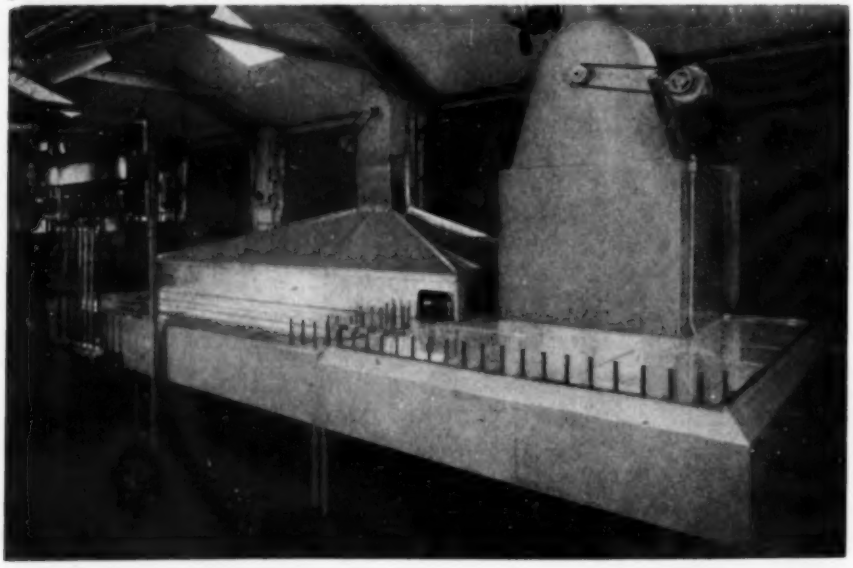
Recommended for speedy, high quality production, and exceptional savings in coating pieces of various sizes and shapes that are difficult to handle.

LET US MAKE A TEST RUN OF YOUR OWN WORK SAMPLES— NO OBLIGATION.

WIRE, PHONE OR WRITE

The CAPITOL MACHINE COMPANY

DANBURY, CONNECTICUT **Tel. Danbury 3-2758**



Rugged Enamel stands up!

Road Builder stands out!

Caterpillar DW21 Tractor and Scraper in workout at proving grounds of Caterpillar near East Peoria, Illinois. An R-M enamel has to be good to stand up here!

Caterpillar Machines catch the eye with R-M "Hi-way" Yellow!

Over the hills and over the highways, Caterpillar road builders *stand out!* Finished in bright, bold and durable R-M "Hi-way" Yellow enamel, this powerful equipment presents an outstanding example of how an R-M Color actually *goes* to *work* for the product on which it is used. As a *very durable enamel,* it prolongs product life; as a *highly visible color,* it helps prevent accidents; as *a bright color,* it draws the eye to Caterpillar equipment; and as *a consistent color,* it promotes equipment sales through easier identification with the product name. R-M lacquers, enamels and undercoats are used on the finest passenger cars in America, on hard working farm and earthmoving equipment, on giant Diesel locomotives and many others. Ask us how R-M color *can work for your product!*

Write for booklet on U. S. Government Specification Finishes

R-M

RINSHED-MASON CO.

Manufacturers of fine lacquers, enamels and undercoats for leading products of industry.

5835 MILFORD AVE. . . DETROIT 10, MICH.
1244 N. LEMON ST. . . . ANAHEIM, CALIF.

LOWEST "Per Unit Production" FINISH BAKING COST

Only Fostoria Has THE KEY

MOST EFFICIENT OF ALL FINISH BAKING OVENS

Typical of many thousands of cost-saving Fostoria installations is the oven pictured above at the Tropic-Aire Co. (Div. McGraw Electric). This oven is used to bake gloss white and various color wrinkle-type finishes on electric heaters, roasters, roaster cabinets, etc. The oven is double switched to provide variations for different type finishes. *Baking time for both type finishes is 10 minutes.* Another Fostoria oven handles burn-off of oils and compounds in 3 to 4 minutes. Both ovens are ceiling mounted, saving considerable floor space.

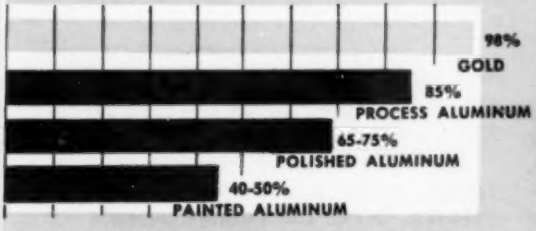
SEND FOR COMPLETE FACTS — Write for this brochure of technical facts on Infra-red with case histories of many installations. Tell us about your particular problem and we will include data directly applicable to your operations.

THE FOSTORIA

it — GOLDEN WALL-EVENRAY REFLECTION

VITAL TO INFRA-RED EFFICIENCY

Everywhere, finishing departments are cutting costs, speeding production, saving floor space, saving manhours by modernizing with Fostoria Infra-red ovens. No other method of heating is so amazingly fast, so easily controlled, so highly efficient. Like the sun, Infra-red lamps radiate electro-magnetic rays which create heat instantly *when directed upon any object.* Fostoria Golden Wall-Evenray reflection is the vital key which *directs, reflects and redirects* these Infra-red rays *uniformly* with the *highest productive utilization of energy.* Only Fostoria has it! The result is finer finishes, faster production and particularly lower "per unit" baking cost than with any other oven.



GOLD PLATED OVEN WALLS

Gold is by far the best reflector of Infra-red rays, 98% efficient. There is practically no energy loss through the gold plated Fostoria oven walls. Use of any other reflecting surfaces would absorb and waste from 15% to over 50% of all Infra-red rays. (See chart.) Obviously, the KW consumption per unit production is much less with a Fostoria oven.

EVENRAY REFLECTORS

Fostoria gold plated reflectors are scientifically designed to *direct and uniformly distribute* energy on the product being processed. This is vital. There are no hot spots. Whatever the critical temperature of the finish is, Fostoria ovens produce the temperature *evenly* over the whole product surface. Only Fostoria has it.

- **Highest productive utilization of energy — lowest energy loss**
- **Uniform heat distribution to all product surfaces**
- **Instantaneous heat, instantly controlled — no stand-by time — no overheating**
- **Lowest unit production cost and finest, most durable finishes**
- **Listed by Underwriters' Laboratories, Inc.**

INFRA-RED fostoria OVENS

PRESSED STEEL CORPORATION, Fostoria, Ohio

Oldest and Largest Manufacturers of Industrial Infra-red Ovens

Finishing

BY A. R. SCHREIBER
Plant Superintendent
The C. F. Pease Co.

CONTINUOUS TRACING reproduction machines are designed to make blueprints, brownprints and whiteprints. However, for the purpose of this article which has to do with the finish and not the mechanism, I shall refer to them as blueprint machines.

We have two standard types of finish — hammered and wrinkle. Ours is not a so-called high-speed production finishing system, due to certain specific manufacturing requirements of blueprint machines. All parts receive the same cleaning, prime coating and insulating operations, regardless of which type of finish will be applied.

Machine parts entering the finishing room are thoroughly degreased. Next the outside surface is spray coated with a gray synthetic primer. The inside surface of the machine cabinet is given a coat of insulating and sound deadening material. This interior coating serves a double purpose; it insulates the machine against heat and it deadens sound to promote quiet operation.

Concealed parts are given a coat of lacquer primer, followed by a top

After cleaning the metal, a variety of operations follow, depending upon the parts and surfaces being worked on. The finishing of outer surfaces usually includes a coat of surfacer, and knife glazing where necessary, followed by drying, sanding, blowing off, tack rag wiping, spraying hammer-effect or wrinkle finish, and oven baking at 265°.

coat of lacquer. All of the coatings thus far mentioned are air-drying materials, therefore sufficient drying time must be allowed between coats.

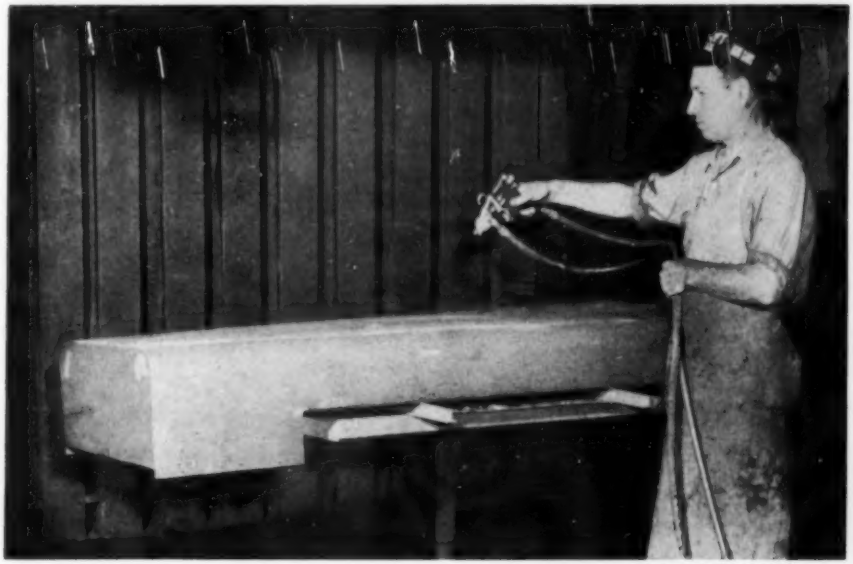
Upon completion, all pieces are transferred to the finished parts stock room. Some of the parts are interchangeable between the various sizes and models of blueprint machines. Sufficient parts are requisitioned from the finished parts stock room to make up the various line assemblies.

Each blueprint machine contains about 60 parts, exclusive of the mechanism. These pieces are requisitioned and the entire machine, including the mechanism, is assembled, inspected and tested on line assembly. Upon completion the outer casing or cabinet is removed. Then all outside surfaces are lightly scuff sanded with No. 220 wet-or-dry sandpaper. Portable compressed air sanders are used for this job.

Surfacer Coat; Knife Glaze; Sand; Blow Clean; Tack Rag

After cleaning up and tack ragging, the outside metal surface is given a spray coat of neutral gray surfacer. This medium heavy coat air-dries in about 30 minutes. Next the surface is carefully inspected, and any rough spots, dents or deep

Spraying hammer-effect finish on machine cabinet. Note spots that have been knife glazed.



scratches are knife glazed. The glazing putty thoroughly air dries in about 30 minutes. The surface is sanded with No. 220 wet-or-dry sandpaper, finishing up with No. 320. Then all pieces are blown clean and tack ragged.

Hammered Finish in Gray and Black Air-Dry

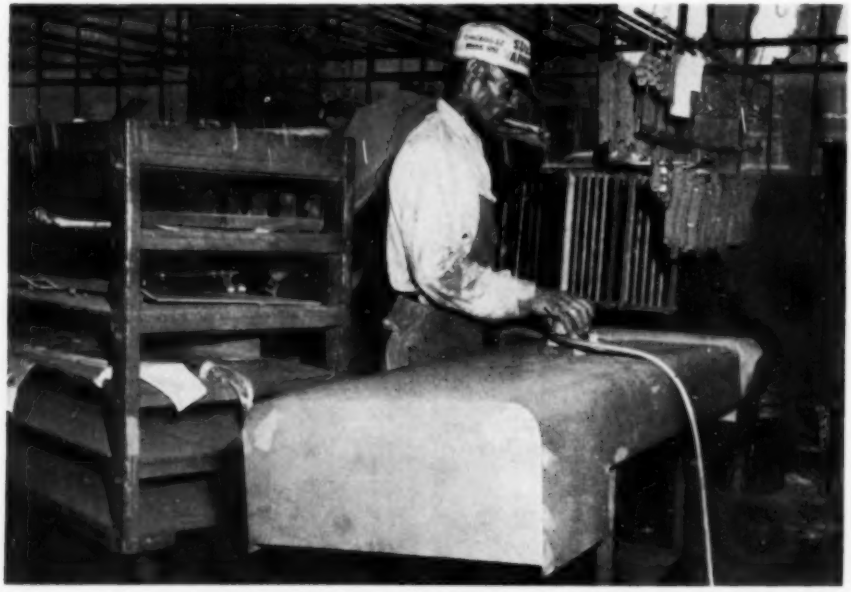
Up to this point all parts have followed the same procedure and received identical treatment. In other words the foundation is the same, whether the cabinet will be finished in a hammered or wrinkle pattern. If it is to be coated in hammered finish, one coat of gray hammered material is sprayed on. Its viscosity is 45 seconds at 80° F., as measured in a No. 4 Ford cup. In spraying, the atomizing pressure used is 40-lbs. and the fluid pressure is 17-lbs.

Semi-concealed parts and trim are given a coat of black hammered finish, using an atomizing pressure of 50-lbs. and fluid pressure of 20-lbs. The viscosity is 55 seconds at 80° F., No. 4 Ford cup.

This hammered material will air-dry sufficiently to handle in 12 hours and to work in 24 hours. After the latter period, cabinets are assembled, followed by final inspection and testing before they are crated for shipment.

Wrinkle Finish Sprayed; Baked at 265° F.

For blueprint machines that are to be wrinkle finished, the parts receive the same basic coats and are then sprayed with gray wrinkle



Metal cabinets are sanded smooth after knife glazing. Blowing off and tack ragging follow.

Use Behr-cat* Tape

Here's everything you want in a masking tape:

- ▲ STRENGTH—nicely balanced between tensile strength lengthwise and tear strength crosswise.
- ▲ STICK—just the right tackiness to stay where you put it the way you put it.
- ▲ STRIP—fast, easy, no-residue strip-off, with no peeling away of your surface finish.

BEHR-CAT Tape is tops for faster, easier masking, stenciling, sealing and protecting on any job. Use it regularly for best results.

YOUR SPECIAL TAPE PROBLEM is welcomed at BEHR-MANNING. Our extensive laboratory facilities are at your service. Put us to the test. Write today. Address Dept. IF-1.

*Trade Mark

BEHR-MANNING
CORPORATION
division of NORTON Company

▲ COATED ABRASIVES
▲ SHARPENING STONES
▲ PRESSURE-SENSITIVE TAPES

Main Office and Plant, Troy, N. Y., U. S. A.
For Export:
NORTON BEHR-MANNING OVERSEAS INC.

WHAT'S THE FASTEST WAY TO CLEAN METAL?
See page 11
WHAT'S THE MOST ECONOMICAL WAY?
See page 9

Oakite's FREE Booklet on Metal Cleaning

answers many questions that mean better production, more profit for you. Just look at the table of contents:

Tank cleaning methods
Machine cleaning methods
Electrocleaning steel
Electrocleaning nonferrous metals
Pickling, deoxidizing, bright dipping
Pre-paint treatment in machines, in tanks and by hand
Paint stripping
Steam-detergent cleaning
Barrel cleaning
Burnishing
Better cleaning in hard-water areas
Treating water in paint spray booths
Rust prevention
Machining and grinding

FREE For your copy of the 44-page illustrated booklet *"Some good things to know about Metal Cleaning,"* write to Oakite Products, Inc., 32F Thames St., New York 6, N. Y.

OAKITE

Specialized Industrial Cleaning Materials • Methods • Service

Technical Service Representatives Located in Principal Cities of United States and Canada

enamel. This material is sprayed with an atomizing pressure of 50-lbs. and a fluid pressure of 20-lbs. The wrinkle pattern is formed in a batch-type oven; the finish is baked for 40 minutes at 265° F.

The wrinkle enamel is formulated to produce a fine grained pattern, and is sufficiently flexible to compensate for any difference in flash time in loading the parts in the batch type ovens, so that there will be no difference in color or pattern. Upon removal from the oven, the finished parts cool for about 30 minutes, after which time they are routed to the assembly line where they are assembled, inspected, tested and then crated for shipment.

Dip Tank Trouble? Yes and No

IT WAS JUST a dip tank. There were 15 others like it scattered around the area. It was portable; had casters on the bottom and drank 80 gallons of paint at a gulp; red paint; red baking enamel.

The other tanks had baking enamel too; bright colors, like blues and greens. The service man wasn't worrying about them just now. All he worried about was those tanks that give him trouble. And that red tank was sure dishing it out. Strange too, because the last time any of them quit was six months ago, when four of them went bad all at once. It usually happens that way. This time it was just the red.

A great variety of shapes are dipped in that tank, from an overhead conveyor. Most important item is a long intricate part made of welded tubing. This fateful day, in the middle of a long run of red, the dip tank started building sags in the finish; all at once,

without warning. In the morning everything was fine; after lunch, all rejects.

When the sags were discovered several shop "experts" gathered around the poor tank, poking at it, smelling the paint, and doing other silly things to it, like checking viscosity and specific gravity. They were getting no where, *because there was nothing wrong with the tank or the paint.* How could the poor tank tell them that? How could he let them know that the sags were already there when the parts came to him?

Well, the tank had a friend—the serviceman—and Mr. S. thought the flowcoat primer might be the culprit. He saw that the sags were under the enamel, not in it. So he and the foreman ganged up on the flowcoater. But that guy was tough. It didn't take him long to prove that he was okay and that they had better look elsewhere for the trouble.

All this time the dip tank stood there stirring his paint in frustration. He knew what was wrong. He had seen it happen. So had Mr. S, the serviceman. But Mr. S. had been busy at something else at the moment, an hour ago, and had forgotten. Now, as Mr. S. mopped the sweat of nervousness from his brow—now, after all this time had been wasted, he remembered.

It had been a very hot summer day. The cooling tunnel through which the conveyor traveled between the washer dry-off oven and the entrance to the primer flowcoater was overburdened and not working too well. At the be-

USE PREP PRODUCTS!
TO MEET GOVERNMENT SPECS.
MIL-C-10578 JAN-C-490
MIL-C-5541 USA-57-02C
For other Gov't Specs. write for Specification Data Sheet
Prep-n-Cote
Multi-Purpose, Corrosion-Resisting, phosphate coating and cleaning product for mechanical cleaning systems . . . Described in Prep-n-Cote Bulletin 48-91.
Metalprep
General all-purpose Rust Remover and Metal Cleaner, available in wipe-off and dip type grades . . . Described in Metalprep Bulletins 50-34 and 50-37.
Lyfanite
Corrosion-proof Coating for Aluminum Alloys, providing thousands of hours of salt spray and humidity resistance . . . Described in Lyfanite Bulletin 49-98.
Galvaprep
Provides greater paint adhesion on Galvanized Iron, Galvanneal and other zinc-coated surfaces . . . Described in Galvaprep Bulletin 48-89.
"PREP PRODUCTS Used First... Make Your Paint Finish Last"
Prep-pik-l
Heavy Rust and Light Scale Remover; non-corrosive on surrounding equipment . . . Described in Prep-Pik-L Bulletin 49-3
Rust-preev
Economical process to preserve Ferrous Metals from rusting during fabrication and interim storage periods . . . Information on request.
Alumiprep
General all-purpose Metal Conditioner for Aluminum Alloys, available in wipe-off and dip grades . . . Described in Alumiprep Bulletin 50-62.
Emulsoprep
Emulsion and Alkaline Metal Cleaners, available for all types of metals and applications, dip or spray . . . Described in Emulsoprep Bulletin 50-61.
NEILSON CHEMICAL COMPANY
3682 Tecumseh Rd. Windsor, Ont.
6562 BENSON ST., DETROIT 7, MICH.
3411 Union Pacific Ave. Los Angeles 23, Calif.

ginning of summer someone had gotten a large fan to help out.

Today, just before lunch, one of those bright boys that infest every plant had wanted some of that fresh air for himself, and had turned the fan around. Twenty minutes later his foreman had turned it back, but the damage had been done. The parts had been too hot for the prime coat; had set it up too fast. As a result, some sags showed up in the prime coat; the red enamel covered these sags and took the blame.

Now Mr. S. likes to think that the red dip tank knows, and is grateful, that the serviceman took the pressure off him that day; for since then he has never given Mr. S. the least bit of trouble.—*Serviceman.*

CARL-MAYER OVENS

Carl-Mayer exclusive design and patented features ensure the most efficient operation and outstanding fuel economy. Many installations.

Write for Bulletin No. 350

Enamel Drying,
Japanning,
Lacquering,
Ceramic Drying

THE CARL-MAYER CORP.
3030 Euclid Avenue Cleveland, Ohio
Over 30 Years' experience

Write for Catalog of
Paint Testing Apparatus
GARDNER LABORATORY
Bethesda 14, Md.

Emil Spoerry, Jr. Named Executive V.P. of Arco Co.

Emil Spoerry, Jr., has been named Executive Vice-President of The Arco Co. of Cleveland, a subsidiary of American-Marietta Co. Announcement of Mr. Spoerry's new post was made by Kenneth E. Clarke, President of Arco and Vice-President of American-Marietta.

Mr. Spoerry has been Secretary-Treasurer and a Director of The Arco Co. for several years, having joined the company in 1935. Formerly he was Secretary-Treasurer and a Director of The Arco Co. of California, Ltd.

The Arco Co., well-known for its industrial finishes, automotive refinishing materials and research activities in connection with the application of specialized industrial finishes, was acquired in August, 1951, by the American-Marietta Co., a major manufacturer of paints, chemicals, adhesives, resins, metal powders and diversified building products.

M. J. Henry Now Sales Manager For United Lacquer

Melvin J. Henry has been appointed general sales manager of the United Lacquer Mfg. Corp. In this capacity, Mr. Henry will supervise distribution, merchandising, market development and customer service for this manufacturer of lacquers, enamels and protective coatings.

A native of Massapequa, Long Island, Mr. Henry now lives at Plainfield, N. J. During World War I, he served with the U. S. Marines in both France and Germany.

a Labor Saving, Money Saving Idea!

CONTINUOUS STRIPPING

OF HOOKS, HANGERS, with REJECTS

KLEM *Strip-Aid*

Patent applied for

YES for a cleaner, better finish, strip hooks and hangers of paint and enamel before reusing. Do it at a saving of labor and material. Do it as an operation on your regular paint line. Get the facts of Klem's new additive Strip-Aid that makes continuous stripping possible by cutting time and material costs in half on most stripping operations.

KLEM *Chemicals* 14401 LANSON · DEARBORN, MICH.

DEMANDS MADE upon the custom finishing shop extend much farther than the mere application of paint coatings. In custom work the scene is ever changing. It calls for a study of cleaning and surface preparation technique, the designing and building of racks and holders, and the control of conveyor speeds and baking temperatures. Formulation of the finishing material generally establishes certain limitations on the baking time and baking heat, hence this does not offer so much of a problem to the custom finisher.

The customer is usually able to tell us what type of soil—such as drawing compound, oil, shop dirt, etc.—is on the surfaces of the parts, so that we can immediately determine what kind of cleaning and surface preparation operations are best suited to his job. If the customer doesn't know, then we may have to do a little experimenting with some of the materials and equipment that we generally use.

Well Designed Racks Are Important Part of Job

With racks and work holders it is quite different. The success or failure of the entire job often depends upon the type of racks or holders we decide to use. This matter of work holders often applies to metal cleaning and surface prep-

By L. M. AVENSON, President of Avenson Industries, Inc.

28 Years of Experience In the Sale and Service of

CHEMICALS TO CLEAN and PREPARE METAL for PAINTING

Surphos CLEANER AND PRODUCER OF PHOSPHATE COATINGS.

Sol-Klean PHOSPHORIC ACID RUST MOVER AND ETCHER

Industro ALKALI CLEANERS, STRIPPERS AND AIR WASH COMPOUNDS.

Industrosolv SOLVENT EMULSIONS FOR SPRAY WASHING MACHINES.

SOL-KLEAN prepares steel and aluminum for painting, removing rust, oxide and oil. It etches the metal and gives a thin phosphate coating. One volume of Sol-Klean, diluted with 3 volumes of water, usually brushed on the metal at room temperature. It penetrates oil and dissolves rust. Sol-Klean is removed together with the dissolved oil and rust by wiping with rags or flushing with water. Metal may also be cleaned and treated by immersion in hot Sol-Klean and rinsing in water. Sol-Klean is non-inflammable and evolves no toxic or corrosive fumes.

SURPHOS cleans and produces a phosphate coating on sheet metal, machined and cast iron. It anchors the paint finish and increases its humidity and salt spray resistance. Use hot (one ounce per gallon solution) in Power Wetting Machine or dip tank. Acid proof equipment not needed.

NOTE:
Consult Us On Your Government Specification Requirements

INDUSTRIAL CHEMICAL PRODUCTS COMPANY
3778 BELLVUE AVENUE DETROIT 7, MICHIGAN
Representatives In Principal Cities
IN CANADA, MADE AND SOLD BY BOYLE CHEMICALS LTD. LONGBRANCH, ONT.

aration as well as to painting operations—and whether the parts are to be dipped or spray painted.

The size and type of rack or holder determines how many parts can be handled as a unit through cleaning, painting and baking operations—and this, in turn, governs the speed and economy with which the job can be performed. For small parts that can be easily and quickly placed firmly and in correct position on a rack or holder, it is possible to spray or dip coat 100 pieces in almost the same length of time that would be required for ten pieces . . . . so you see that racks and holders greatly influence the rate and volume of production and unit cost of doing any of this work.

To give you a concrete example of the importance of well planned racks in the application of finish coatings, I have selected the painting of toy revolvers or, as they are more often referred to, cap pistols. Each cap pistol is made of a pair of zinc die-castings and a pressed steel trigger piece, as shown at the beginning of this article.

Toy Revolver Castings Degreased; Spray Painted

The pistol castings are placed in wire baskets and lowered into a trichlorethylene vapor degreaser. Then they are dumped into wood bins which are mounted on elevated castered trucks so the bottom of the wood bin is about waist high to a workman. Each bin has a hinged door across its lower width; the door opens out at the bottom. Loaded bins are rolled up to work benches where operators pick up pistol castings through the hinged door and place them face side up on wire-mesh trays, 18 castings to

At left is the gas-fired convection oven in which finish coatings are baked. In background are two spray booths; elsewhere portable racks and trays for holding parts in process.

Solving Dust Problems

with

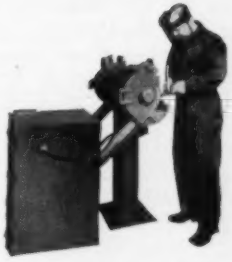
TORIT

DUST COLLECTORS

Lint, dust, polishing paste, all are trapped by this TORIT DUST SEPARATOR

Here is a Torit 19-FB Dust Separator connected to a double end polishing lathe. Note the complete accessibility of the buffing wheels and how a minimum of piping reduces friction losses. Here, dust laden air is cleaned and recirculated. No heat is lost through outside vents.

Torit dust collecting equipment is improving working conditions and preventing dust damage in every type of American industry. There are models for all standard applications and special adaptations can be quickly fabricated. They are economical to buy and install and exceptionally efficient in operation. For complete details and latest Torit catalog, write:



Self-contained units for carrying away dust-laden air around grinding, cutting and polishing wheels, wood saws, sanding belts, etc.

TORIT MANUFACTURING CO.

300 Walnut Street
St. Paul 2, Minn.

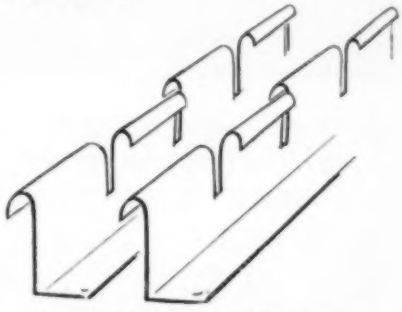
each tray. Loaded trays are placed on dollies and moved to a spray booth where the face sides of the castings are sprayed with a modified O. D. metalescent synthetic enamel. Trays of painted castings are immediately transferred to a horizontal belt conveyor (wire mesh) which carries them through an indirect gas-fired oven where the finish is baked for 15 minutes at 335° F. After cooling, the castings are packed for shipment to the customer.

How Steel Triggers Are Racked for Spray Painting

The cold-rolled pressed-steel triggers follow the same procedure in reference to degreasing and being loaded into portable wood bins. However, they offer a different problem in finishing as compared with the zinc die castings. The inside of the trigger requires no finish, but the outside surface must be painted. To accomplish this by spraying the triggers must be held firmly in vertical position. By this I mean that they must not tilt or lean sidewise, and they must not slide together on the rack.

To hold the triggers properly and in multiple, we designed and built angle iron frames to which we welded narrow strips of thin sheet steel set on edge and parallel to one another. We saw kerfed the upturned edges of these narrow thin strips of steel at intervals of about 2-in. and put a roll bend at the top edges, bending one to the left and the next to the right alternately. The roll bend at the top edge of each fin fits the inside of a pressed metal trigger; holds the trigger firmly in upright position for convenient fast spraying.

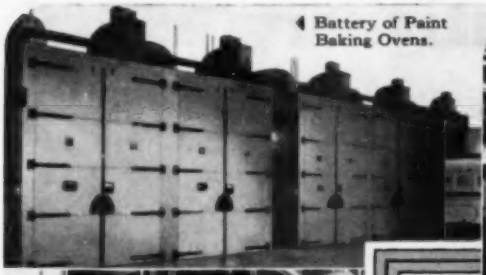
The shape and relative position of the fins or trigger holders are shown in the accompanying drawing. The racks are of convenient size and shape for our workmen to handle and they fit our various facilities, including dollies, spray booth turntables and the belt conveyor that passes through one of our ovens. The fins on each rack will hold 90 triggers — and each trigger is securely held in such a position that it can be sprayed all over except inside where no coating is called for.



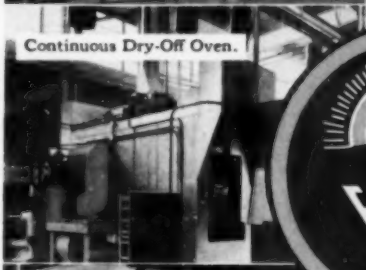
Pressed sheet steel triggers fit over "fins" like these, 90 fins to a rack.

With the triggers held firmly in place on these fin racks, our handling time is reduced to a minimum because the loaded racks can be safely stacked on dollies, and less time and care need to be observed in handling the loaded racks in and out of the spray booth and onto the oven conveyor.

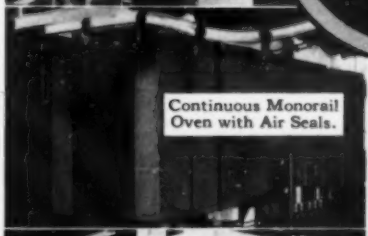
A steel gray metalescent synthetic enamel is used to coat the triggers. This single coating is baked for the same length of time and at the same heat as the coating on pistol castings.


Battery of Paint Baking Ovens.

A-Type Continuous Paint Baking Oven.


Continuous Dry-Off Oven.

LANLY
FINISHING OVENS
THE LANLY COMPANY • 760 PROSPECT AVE
CLEVELAND, OHIO


Continuous Monorail Oven with Air Seals.

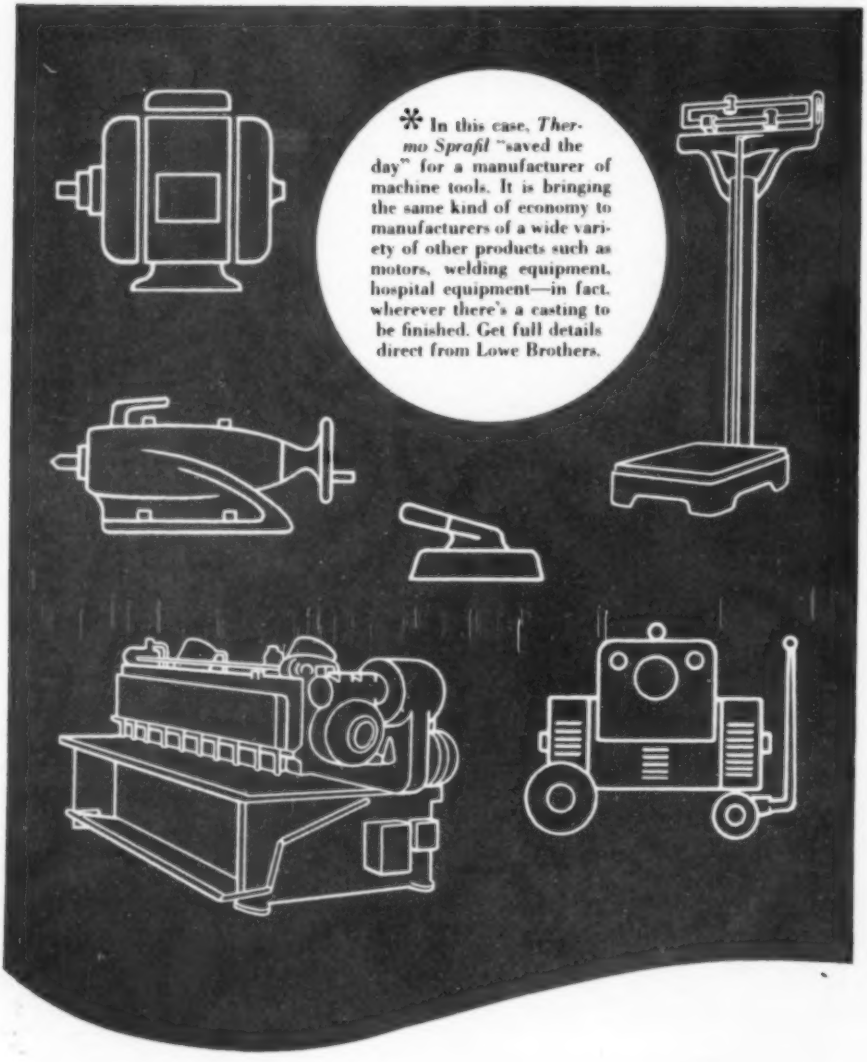
LANLY Specialized engineers are daily consulting with progressive manufacturers and meeting the need for high grade, uniform, finishing oven production at satisfactory volumes.
Continued repeat orders vouch for LANLY competence.
Complete information and literature supplied upon request.

Batch-Type Oven.

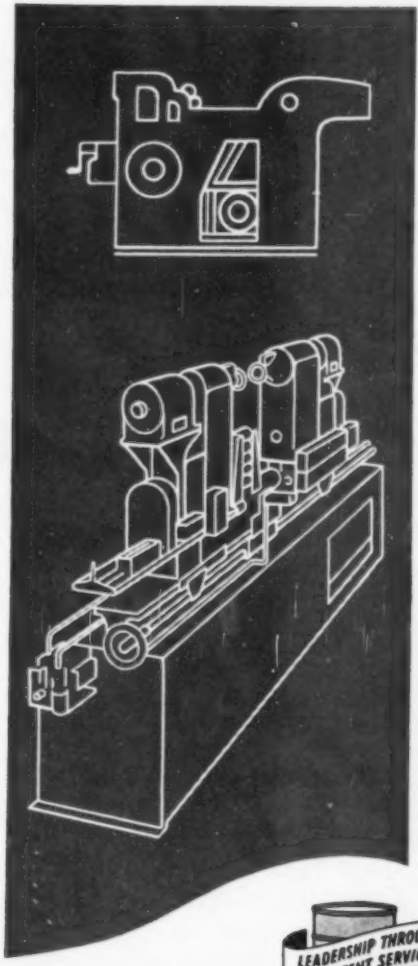
Lay-Down Porcelain Enamel Dryer.

Multiple-pass Finishing Oven.

Revolutionary THERMO SPRAFIL Finishing Operation


* In this case, *Thermo Sprafil* "saved the day" for a manufacturer of machine tools. It is bringing the same kind of economy to manufacturers of a wide variety of other products such as motors, welding equipment, hospital equipment—in fact, wherever there's a casting to be finished. Get full details direct from Lowe Brothers.

System Speeds Manufacturer's . . . Effects Big Savings!



The following experience, reported by a typical machine tool* manufacturer, provides an excellent example of the efficiency effected by Lowe Brothers new *Thermo Sprafil* System. This manufacturer was unable to keep his casting production ahead of machining operations because too much time was required for filling and sanding the castings. A Lowe Brothers "Finishing Specialist" recommended using the new, revolutionary *Thermo Sprafil* System.

Immediately on installation, the *Thermo Sprafil* System produced amazing results. This manufacturer's production has been speeded to the point where he now "stockpiles" castings! There are always plenty of castings ready for the machining operation—and important savings in both time and labor have been enjoyed!

This is just one of many current reports from manufacturers who have enjoyed the benefits of these great *Thermo Sprafil* features. They have learned that *Thermo Sprafil* flows out smoothly, dries rapidly—free from "pin holing"—and greatly reduces sanding time or *eliminates sanding altogether! Thermo Sprafil* may put new economy into *your* operation. No obligation for finding out. Why not write for full particulars now . . . today?

THE LOWE BROTHERS COMPANY • DAYTON 2, OHIO
INDUSTRIAL DIVISION

This advertisement is based on facts taken from Lowe Brothers Industrial Case History Files.

LEADERSHIP THROUGH CONSISTENT SERVICE

Lowe Brothers
FINISHES FOR INDUSTRY

Tracks and supports are moved to these assembly benches for final assembly before packing.

Production Finishing of

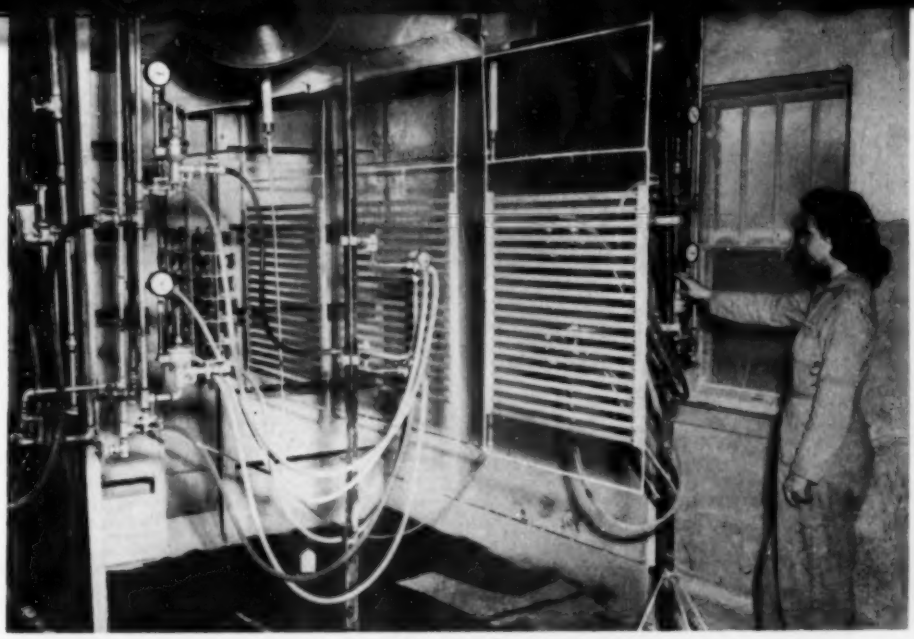
A SET OF TRAVERSE rods, as you probably know, consists of two formed-metal tracks, one of which telescopes into the other. These rods are mounted horizontally across the top of a window frame to support curtains which, by means of a pull cord, may be drawn together to cover the window, or separated to expose it.

Naturally the finishing of these rods could prove to be time consuming and costly. In cross-section the rod or track resembles a capital letter C of condensed type. Being narrow in width, and due to the fact that the curved outer faces must be finished durably and attractively, the paint loss by hand spraying would be prohibitive.

Dip finishing would be practically out of the question because of the difficulty of draining off excess coating material from the inside surfaces of the track. Accordingly we came to the conclusion that automatic electrostatic spray painting offered the logical means of coating these long slender pressed metal rods. Through the use of electrostatic spraying our loss by overspray is less than ⅛ of 1%.

Metal Parts Cleaned in Vapor Degreaser

The two sections of track that make up a completed rod are formed of 24-gauge zinc-coated flat sheet steel. Rod supports are made of 17-gauge zinc-coated sheet steel. The



Traverse rod tracks coming through electrostatic spray booths, with support parts following.

Metal Traverse Rods

Vapor degreasing, handling and racking facilities . . . and why electrostatic spray painting is so adaptable to coating these slender pressed-metal products.

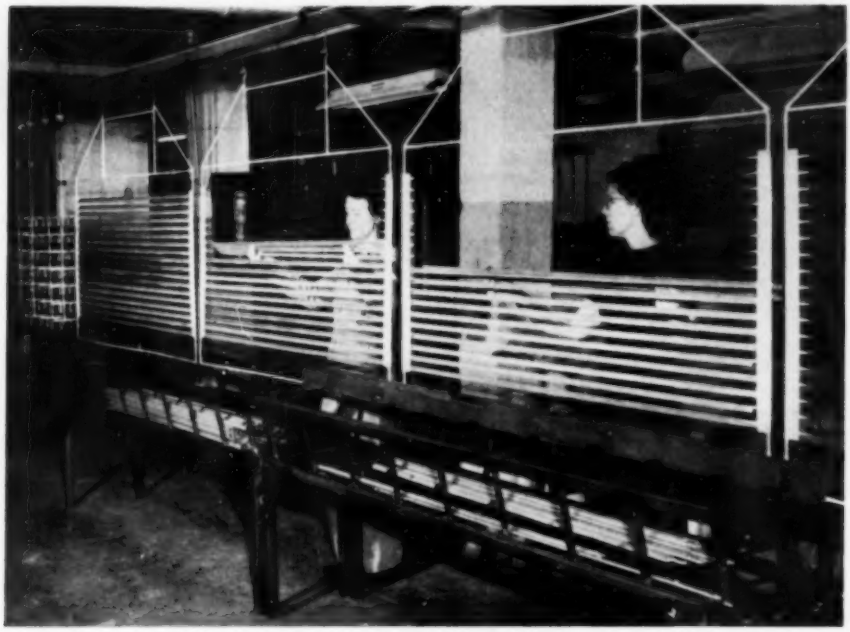
By Alfred F. LaBee

Plant Superintendent
Binkley Mfg. Company

light oil compound, used as a lubricant in connection with forming the track and supports, is removed when the parts are placed in wire baskets and lowered into a trichlorethylene vapor degreaser.

After slushing off, the cleaned tracks are allowed to stand for about eight hours. This waiting period offers no obstacle, as the metal cleaning operation is much faster than our racking, finishing and baking operations. We have found that during this waiting period all of the vapors are evaporated from the metal, and we obtain a better quality finish.

Traverse tracks and their supports are trucked to the finishing room to be racked for coating by automatic electrostatic spraying. The placing of these tracks and supports on racks for mass production finishing, is of the utmost importance. This operation can be both slow and tedious or, by careful



Loading station where traverse rods and supports, are put on racks hanging from conveyor.

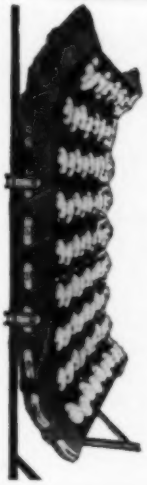
planning, it can be accelerated to be in line with other finishing operations. If it were not so, the loading of racks could prove to be a serious bottleneck.

Unique Device Speeds Racking of Parts

Each rod rack has a 2-point suspension from the overhead conveyor and will hold as many as 18 tracks mounted one above the other in horizontal position. For holding track support parts we have circular racks, each with single-point suspension and with a swivel connection that permits the racks to be revolved manually while being loaded; they revolve mechanically while being electrostatically spray painted. Each filled rack holds 56 pieces.

At the loading station, metal troughs are conveniently located just below and parallel to the conveyor. Traverse rod tracks and supports are placed in these troughs for loading on the racks (see above).

A double guide rail engages the lower edge of each rack to prevent it from swinging sidewise while it is being loaded. This detail is important in speeding up the loading operation, as it permits the operator to use both hands while loading instead of having to use one hand to steady rack while positioning the work with the other hand. [*To p. 44*]



Patent-Flex

INFRA-RED OVENS

The patented adjustable contour construction, which these ovens embody, permits the Patent-Flex oven to be shaped exactly to suit your requirements.

The PATENT-FLEX "oven-shape-adjustment" guarantees that you can obtain maximum operating efficiency from every lamp in your oven.

If you later change your product you simply re-shape the oven sections to maintain top efficiency.

A COMPLETE LINE from large DRIVE-IN OVENS to small ROLLER TRAY OVENS.

ASBESTOS INSULATION conserves heat, and uses fewer lamps. The metal-backed asbestos panel construction keeps more Infra-Red heat in the oven.

Patent-Flex design permits tight multiple section joints, with each section individually adjustable from the outside.

OUR RECENTLY COMPLETED PLANT EXPANSION now provides manufacturing facilities sufficient to handle more than double this entire country's total 1952 anticipated Infra-Red requirements. Consequently, we give immediate delivery, and will continue to give immediate delivery.

YES! DELIVERIES RIGHT NOW from continuous replenished stocks. Even factory shipments on 100 ft. long ovens are made in 3 or 4 days.

High Efficiency, plus Low Prices. Patent-Flex Ovens are the lowest priced Infra-Red Ovens on the market. This is due to quantity standardized production, and the complete elimination of custom engineering.

To give you an idea of prices, the net price on the 6 Row Portable Caster Base, 48" long oven section, as illustrated, is $178.00. The 4 Row Straddle Section 48" long is $126.00 net. The Single Row Unit has a net price of $21.50 each.

Ovens use R-40 lamps with hermetically sealed reflector, which never has to be cleaned. Obtainable from your wholesaler on your lamp contract.

Patent-Flex Ovens are sold and distributed nationally by:

GENERAL ELECTRIC SUPPLY CORP.
WESTINGHOUSE ELECTRIC SUPPLY CO.
GRAYBAR ELECTRIC COMPANY, INC.

For engineering advice write to

WIL-SON MANUFACTURING CO. CLOVERPORT, KENTUCKY

MOST REVOLUTIONARY DEGREASER DEVELOPED!

BAR-L* Vapor DEGREASER

Use Solvent Drum for a Tank!

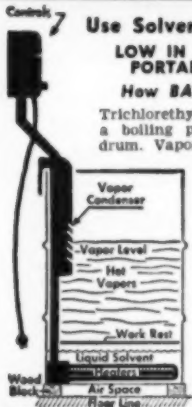
LOW IN COST—ECONOMICAL
PORTABLE and PRACTICAL

How BAR-L Degreaser Works

Trichlorethylene solvent is heated to a boiling point in lower section of drum. Vapors condense on work and wash off oil, grease and dirt. Most parts can be cleaned in seconds! Solvent vapors are kept **inside the drum** by a scientifically-designed condenser which returns solvent to boiling chamber.

REMEMBER: Anything that can fit into a solvent drum can be cleaned in a BAR-L Degreaser! And it's priced right!

Write for details on other "MF" Degreasers.



* Patent Pending

Manufacturers Processing Co.
METAL CLEANING CHEMICALS AND EQUIPMENT
1381 MILTON ROAD DETROIT 20, MICHIGAN

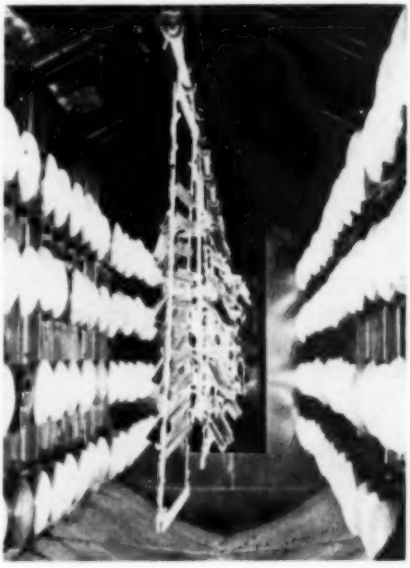
Standard of the FINISHING INDUSTRY for 17 years.

DETROIT "HANDY" "TAC" RAG

DETRO MFG. & SALES CO., INC., CULVER CITY, CALIF.

All Work is Coated by Electrostatic Spraying

The overhead monorail conveyor, driven through a variable-speed drive at about 5-ft. per minute, carries loaded racks through the electrostatic spray booth. The work passes through a 130,000-volt electrostatic field. Synthetic enamel, at a viscosity of 14 seconds at 78° F., as measured in a No. 4 Ford cup, is sprayed from four guns, using an atomizing pressure of 16-lbs. and a fluid pressure of 3-lbs.



A peek inside the infra-red oven where the finish coating is baked for 3½ minutes.

As mentioned previously, the paint loss by overspray is negligible due to the fact that almost all of the ionized paint particles are attracted to and deposited on the work passing through the electrostatic field.

SAVE TIME MANPOWER with CIRCO VAPOR DEGREASERS

You can save dollars on your cleaning operations by installing CIRCO Vapor Degreaser in your production line. With its use metal parts cleaning is speeded up and made more efficient. Grease, oil and dirt are quickly and effectively removed from the parts by the vapors of the solvent. Chips, insoluble impurities, buffing compounds and stubborn dirt are completely removed with clean solvent flushing. Maintenance and operation costs are at a minimum. Solvent is distilled and reclaimed automatically.

WRITE FOR — *complete catalog*
Use PER-SOLV or CIRCO-SOLV for all Vapor Degreasing requirements

CIRCO VAPOR DEGREASERS available in all types, vapor, vapor-immersion, vapor-spray and combinations. All sizes from small batch-type degreasers to custom-built monorail or cross-rod conveyor models.
1666

TOPPER EQUIPMENT COMPANY
MATAWAN, NEW JERSEY • OFFICES IN PRINCIPAL CITIES
MANUFACTURERS OF VAPOR DEGREASERS AND METAL PARTS CLEANING EQUIPMENT

The finished parts travel for a space of about 10-ft. to allow a 2-minute flash time before they enter the infra-red electric oven where the finish is baked for 3½-minutes at 325° F. After the finished rods become cool, they are ready for inspection, assembly and packing.

With a finishing cycle of less than 30 minutes (29.8 minutes to be exact) we finish from 3500 to 4000 complete traverse rods per day, depending upon the lengths of the rods being finished.

Burdett Expands Oven Building Facilities

Burdett Mfg. Co., 3433 W. Madison St., Chicago 24, Ill., long established manufacturer of gas-fired combustion systems featuring the "Radiant-Heat" principle, has expanded its facilities to include an engineering and sheet metal department for greater production of industrial ovens.

The industrial oven line includes standard and special designs to meet the wide range of requirements and is adaptable to any type of combustion system. The concern continues featuring the "Radiant-Heat" principle because of the unusual results obtained in all of its applications.

Screen Process Census-Survey is Being Made by SPPA

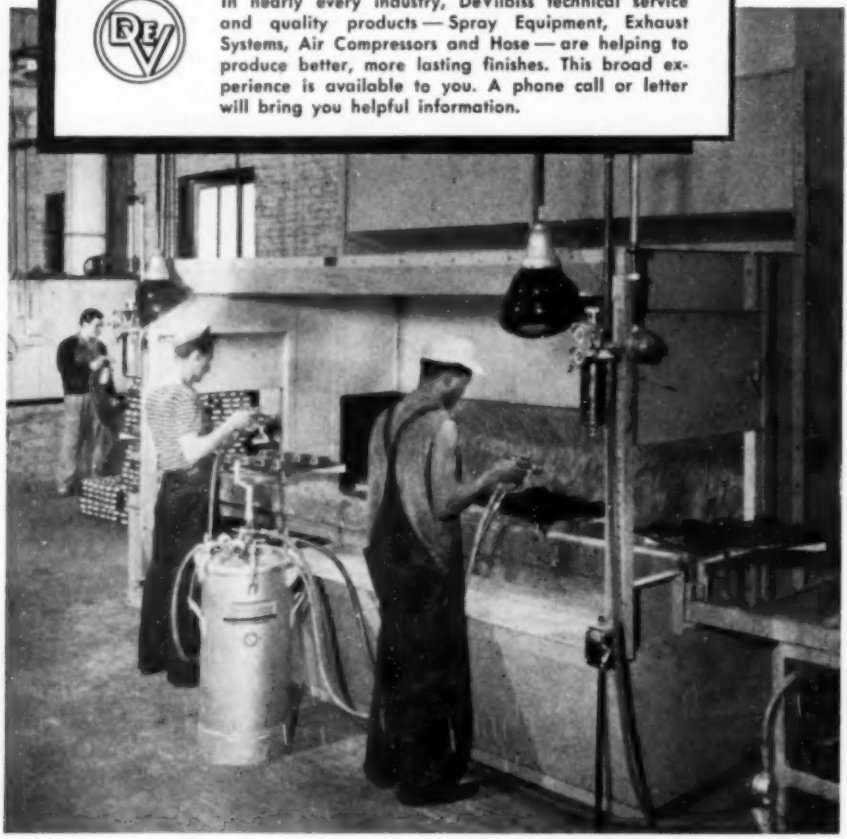
The first national census-survey ever to be undertaken in the industry has been launched by the Screen Process Printing Association, International, from its home office in Chicago (549 W. Randolph St.). Over 10,000 questionnaire forms are being mailed to screen process operators all over the country.

The Association's leaders are convinced that this effort will provide material for a comprehensive analysis of this rapidly developing printing method which today is regarded as the fourth major process in the field of graphic arts.

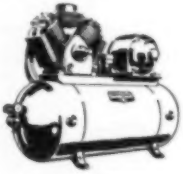
The Association's International office plans to publish the complete findings of the census-survey some time during the summer months.

It's the teamwork that pays off

In nearly every industry, DeVilbiss technical service and quality products — Spray Equipment, Exhaust Systems, Air Compressors and Hose — are helping to produce better, more lasting finishes. This broad experience is available to you. A phone call or letter will bring you helpful information.



This DeVilbiss conveyorized finishing setup helps small-parts manufacturer spray-paint hundreds of parts per hour.



Air Compressors

Hose and Connections

Spray Guns

How to spray hundreds of small parts per hour and save money

This shop turns out a great variety of small metal stampings by the thousands. Painting was a big problem. Often it was a serious bottleneck.

Then, the owner called in DeVilbiss. The attractive installation you see pictured at left was installed. It consists of a DeVilbiss water-wash spray booth, chain-on-edge conveyor, spray guns, hose, air transformers and paint tanks.

Parts to be painted are placed on wire trays. Spray operators paint tops and sides of parts, rotating the trays manually as they pass through the spray booth.

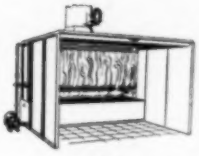
Compared to former methods, parts are now finished much faster, considerably better and at a lower unit cost. Improved finishing techniques like this are typical of the benefits you get with DeVilbiss service and quality products.

If you're troubled by finishing department bottlenecks, or if you would like expert advice on finishing problems, phone our nearest branch office or write us. We welcome the opportunity to serve you.

THE DEVILBISS COMPANY, Toledo, Ohio

Windsor, Ontario • London, England • Santa Clara, Calif.

Branch Offices in Principal Cities



Spray Booths

FOR BETTER SERVICE, BUY

DEVILBISS

Inside view of wet-blasting equipment, showing work under way.

Wet Blast Cleaning Jet Engine Parts

AS PART of its continuing effort to improve the dependability of aircraft engines, Pratt & Whitney Aircraft division of United Aircraft Corp., East Hartford, Conn., recently installed a large custom-built wet-blasting unit manufactured by a company in Hartford. The new wet-blasting equipment is used primarily for cleaning experimental jet engine parts after the assembled engine has been run and then disassembled for inspection.

At the extremely high temperatures at which jet engines operate, turbine sections and exhaust ducts become covered with a hard, tough coating of lead sulphate and lead oxide which is literally baked on. This coating has to be completely removed in order to properly inspect the engine parts after the test-running.

Inspection Procedure; Defects Revealed by Black Light

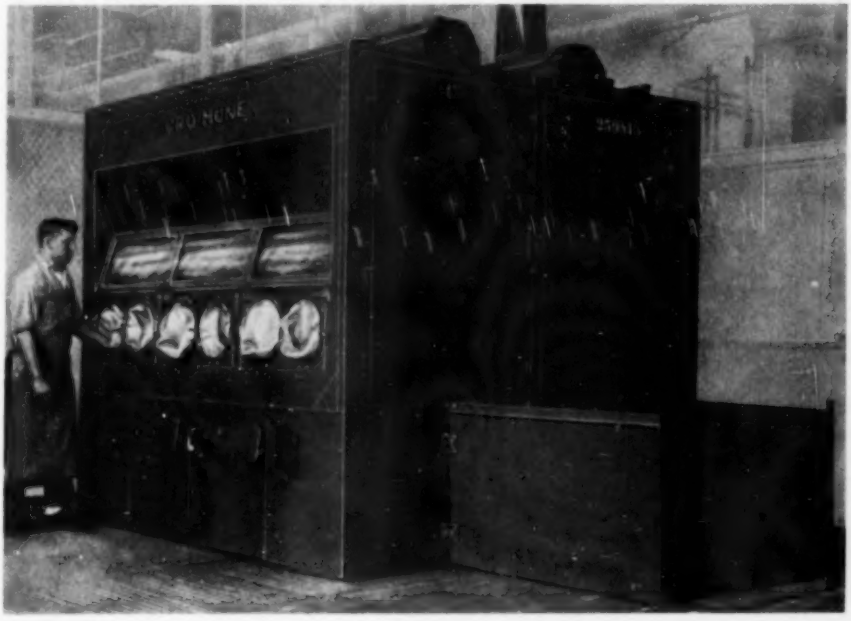
Pratt & Whitney Aircraft's inspection procedure calls for the parts to be immersed, after cleaning in a Xyglo bath (penerating oil) and then to be exposed to "black" light. Cracks that may have de-

veloped during the running of the engine show up clearly in this light. Absolute cleanliness of the parts is required since any surface contamination would defeat the inspection.

The coating mentioned clings so tenaciously that it has to be eroded off. For this job, wet-blasting proved to be a satisfactory cleaning method. Dry abrasive blasting is unsuitable for the metals from which these parts are made since it is too abrasive. The grits used are too coarse, and cannot be given the "cushioning" effect which is possible with wet-blasting. Hand-cleaning would be too slow and expensive and would risk damaging the precision-finished surfaces; also it could not do a sufficiently thorough job on these large engine sub-assemblies, as well as on the many smaller parts. The larger assemblies, such as turbine wheels and nozzle vane sections are so complex and intricate, with many inaccessible locations and with sharply-curved surfaces, that they could be cleaned on a practical basis only with wet-blasting equipment.

Wet-Blasting Setup for Large and Small Parts

The wet-blasting unit is large enough to handle large engine parts and sub-assemblies as well as small parts. It is contained in an 8-ft. cube, with a 5-ft. by 7-ft. opening at the right side of the cabinet. Through this opening can be rolled out a 6½-ft. turntable (supported by an angle-iron framework) for



Showing the front and loading side of wet-blasting unit at which three operators can work.

easy loading of the larger-sized components; the turntable is then rolled back inside the cabinet for the cleaning operation. Three operators can work on the unit at one time, with each operating one or two wet-blasting guns.

The cleaning operation involves the high-velocity transfer of a fine abrasive suspended in water in a constantly-agitated state through aspirator jet guns. These guns operate on regular shop compressed air lines and pressure. When the high-speed wet-blast is directed at the engine parts, the force of the abrasive particles produces a clean, velvet-smooth surface without removing any significant amount of metal.

The wet-blasting mixture or slurry is supplied from a sump beneath the turntable. This is air-agitated while the guns are in operation, and does away with the need for circulating pumps and for cleaning supply lines whenever the unit is shut down.

After cleaning, the large components are rolled outside the cabinet while still on the turntable and the work is rinsed with fresh water. The turntable drains into a small square catch basin in which the grit settles and the water overflows to a floor drain. Thus the abrasive can be recovered without diluting the blasting mixture in the supply.

The cabinet itself is of welded stainless steel with an angle-iron

Loading side open and turntable moved out to give easy access for loading and unloading.

no time for second guessing

CONSULT AN EGYPTIAN INDUSTRIAL FINISHES SPECIALIST

SYNTHETICS
•
VARNISHES
•
LACQUERS
•
ENAMELS

Neither the trying production problems inherent in today's highly competitive civilian market, nor the rigid Government specifications for finishing defense products, permit time for second guessing.

If you manufacture for the civilian market the product *finish* you choose should be the outstanding one in its field . . . you can't afford to second guess while competition builds sales.

If you are engaged in defense work where speed is of the essence . . . it is vital that the product *finish* you apply meet every exacting Government specification . . . the Defense Program allows no time for second guessing.

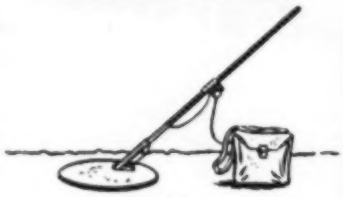
Your thoroughly trained, sales and production minded Egyptian Industrial Finishes Specialist holds an enviable record for helping manufacturers "Finish Right" the first time . . . it will pay you to consult him today.

EGYPTIAN
INDUSTRIAL FINISHES

The EGYPTIAN LACQUER MANUFACTURING CO.

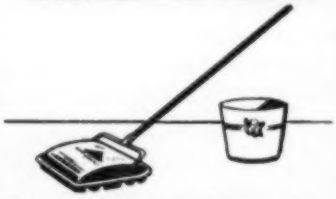
BOX 444, NEWARK 1, NEW JERSEY
Plants: South Kearny, N. J. • Lafayette, Ind.

D. O.
(DEFENSE ORDER)



or

B. A. U.
(BUSINESS AS USUAL)



You'll Rate Duralac

O. K.

in supplying the following to exact specifications, government or civilian.

- **Lustrous, semi-gloss lacquers**
- **Wrinkles • Primers • Thinners**
- **Specialty Products**

SEA-LAC

Duralac Chemical Corp.
84 LISTER AVE., NEWARK 5, N. J.

frame for rigidity. Sweat copper plumbing is used throughout; cabinet lighting is supplied through eight 40-watt fluorescent tubes in two parallel troughs in the ceiling. Exhaust vapors are extracted through a stack at the rear of the cabinet, by means of a 10-in. filter-equipped blower, driven by a 2-hp. motor.

Editor's Note: The foregoing story and photographs for illustrations were supplied by The Cro-Plate Co., Inc.

Conforming Matrix Adds Important Personnel

In a continuing program of personnel expansion for the enlargement of its scope of service to manufacturers who spray paint their products, Conforming Matrix Corp., Toledo, Ohio, has announced the appointment of two well-known engineers.

Elmer L. Faber has been appointed plant superintendent and head of the engineering department; and Milton T. Schimmel has been made engineering sales manager.

Elmer L. Faber and Milton T. Schimmel

Both men are university graduates in mechanical engineering and have had years of practical engineering experience with well known industrial concerns.

Conforming Matrix Corp. is the original and largest manufacturer of spray pointing masking shields, tools and fixtures, mask washing machines and automatic air-operated hydraulically controlled machinery for the spray painting of a variety of small parts on a mass production basis.

design engineers know...
there's no guess when it's a finish by...
STANDARD
for years, Design Engineers have specified with confidence products which have been finished with Industrial Finishes by STANDARD. That's because they recognize and appreciate the advantages of a product whose finish gives longer, more durable protection through years of hard wear and abuse and still continues to look attractive.
There can be no doubt that products and equipment treated with Finishes by STANDARD consistently give finer performance and service in spite of punishing conditions.
STANDARD VARNISH WORKS
STANDARD-TOCH CHEMICALS, Inc.
COATINGS • COMPOUNDS • CHEMICAL PRODUCTS
NEW YORK
CHICAGO
Linked to Industry

Finishing Room Troubles?

MAYBE IT'S YOU... LET'S SEE!

BY TROUBLE SHOOTER

A FEW OF THE companies that use industrial paint finishes are constantly plagued by a series of troubles in their paint departments. No sooner is one complaint straightened out than something different crops up. Sometimes they switch from one paint supplier to another, looking for relief. Sometimes they stay with one, but raise hell every time the salesman or serviceman calls. Invariably the source of their trouble is in their own paint department, but often someone in authority there is too bullheaded to admit it. I call them "Stubborn Johns".

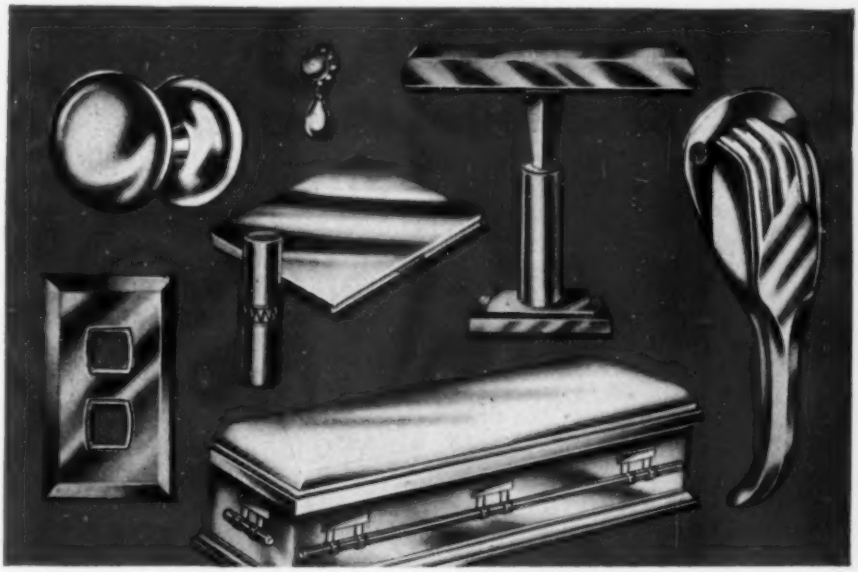
Fast growing factory installed new equipment... but removed from the finishing room that extra man who is really needed to continually inspect, direct and supervise the performance and proper maintenance of all workers, materials, supplies and equipment in active service.

It has been one of my beliefs that it takes an Act of God to reform a Stubborn John. Perhaps "Act of God" is too strong a term. However, it is the only reasonable explanation for the amazing series of coincidences that finally cured (I hope) one of my customers. It happened like this:

This company was new in the industry. It had started in a small shop but was growing as fast as taxes and an energetic sales force would permit. A few paint troubles had shown up but these were easily diagnosed, and sometimes as easily corrected. Finally, during one of its periodic expansions, this concern installed new paint department equipment (costly but worth it) and immediately became my Stubborn John.

Guardian of the Payroll Moves "Extra Man" Out

The firm always had a "Guardian of the Payroll" who had been very active in other sections of the plant. When the new machinery was well broken in and operating smoothly he moved in on the paint department and transferred one man out. Thus they lost that "extra man". For a week or two all



NOW... simulate copper, brass and bronze on products like these with M & W PLATELUSTRE

Don't let critical metals put a *needless* crimp in your production!

Take zinc or steel—apply a coating of one of the new PLATELUSTRE finishes. You wind up with products and parts that look so much like copper, brass and bronze that *the eye can scarcely tell the difference!*

Whether you have been using now unavailable copper and its alloys for *making* products or for *plating* products, you will find these new M & W finishes *equally* effective in keeping your plant running. There are types for air-drying and baking schedules—pick the one that best fits *your* production requirements.

Let an M & W Technical Service Engineer show you—*right in your own plant*—how easy these PLATELUSTRE coatings are to use, and what striking effects they produce. Or, if you prefer, write for free literature.

PIONEERS IN PROTECTION

OUR 76th YEAR

MAAS & WALDSTEIN CO. 438 RIVERSIDE AVE. NEWARK 4, N. J.

Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill. • Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.

MANUFACTURERS OF INDUSTRIAL FINISHES

went well. Then something slipped. When that was corrected, something else happened. And so it went, month after month.

The paint salesman and I knew whom to blame. But the "Guardian of the Payroll" had a couple of arguments that we could not refute. First he said, "This expensive equipment ought to allow me to save on manpower." Then he added: "You can't tell me that our trouble isn't caused by the paint. Your factory is doing something to it. It isn't like what we used to get". He didn't have a laboratory, and he didn't believe ours. He was blind, perhaps because he wanted to be.

For six months this went on. Then one day the roof fell in on him. In rapid succession the following happened: A key man was transferred from the paint shop and replaced by an inexperienced helper. Next day a brand new but defective paint pump was put into use; and finally the paint supplier shipped in two consecutive batches of paint that were not quite up to standard. The paint would have been passable under ordinary conditions, but now conditions were changed and its weak points were exaggerated several times over.

"He's a paint sprayer at the defense plant . . . but he just can't forget he used to be a cowpoke."

Many Things Go Bad Fast; Service Man Bails 'em Out

Even though the department was one man short they still might have overcome any one of the handicaps. Two or three they could not handle. Two weeks went by while the finish on their products became progressively worse. When it became absolutely impossible they put in an emergency call for a serviceman. He grinned a little when he saw the mess because he had been waiting six months for this to happen. When he realized how bad it really was he cussed. Then he rolled up his sleeves.

First the *solvent*. They had gone from fast toluol through xylol to a slow hi-flash. It took three hours to dig out this information and get them back to toluol. Then *viscosity*. Like solvent, they had tried them all; when nothing worked, they paid no more attention to it. Finally *film thickness*. It was at this point that we found the defective pump. However, it took almost a day to prove to their satisfaction that the pump was operating erratically and, as a result, paint was being put on in thicknesses of from one to five mils. [*To page 58*]

We Can Help You

Find the **RIGHT** Answer to **YOUR** Finishing Problem

Here's a Typical Example—

When certain metal manufacturers found they could no longer chrome plate, or that they could use only "scant" chrome plating . . .

We developed Clear Coatings (baking and air-dry types) which give "better than the original" service in two ways:

1. In conjunction with chemical preparation to closely simulate chrome plating or brass.
2. To give long-life protection to scant chrome plating (chrome over copper without nickel).

Take advantage of this *proved* ability to develop special finishes for all purposes—and to supply fine civilian and government specification finishes of all types.

Send details of your requirements

Strathmore Products, Inc.

1970 W. FAYETTE ST. Phone 4-2118 SYRACUSE 4, N. Y.

KEEP SPRAY BOOTHS SAFER FROM FIRE!

. . . WITH NON-INFLAMMABLE

BOOTHCOTE #4

FOR DRY WALL BOOTHS AND THE NEW

BOOTHCOTE #5

FOR WATER WASH BOOTHS

Makes frequent cleaning easy. Premixed, ready to use, safe to store. Saves time, labor, no flaking off. Spray or brush on clean booth. When desired, operator peels off overspray in sheets. Advocated by insurance companies.

Money-back trial offer: 5 gals. **$6.25**

HYGRADE'S STERLING CREME

protects hands and arms from paint, grease, ink, etc. penetrating the skin. Soil washes off easily without harsh solvents or cleaners.

40 lb. pail **$12.**

HYGRADE'S STERLING CLEANER

dissolves grease, grime, fresh paint, tar, printers' ink, shellac, mastic cement, etc. without water.

40 lb. pail **$7.50**

All prices f.o.b. Buffalo

HYGRADE

FOOD PRODUCTS CORP.

Industrial Div., 18 Stetson St.

Buffalo 6, N. Y.

When all of these things had been straightened out the finish was almost up to standard. But it was evident that it could be improved a little. The formulator came out from the Lab, gave it a shot of this and that, and made it look like it should look.

The salesman, the formulator, and the serviceman then ganged up on the "Guardian of the Payroll" and convinced him that the "extra man" out there would have prevented most of their troubles for the past six months. Of course, the last two weeks were special, and required special knowledge to handle. However, the extra man with his extra time might have found the bad pump without help. He might have been able to follow up on some of the experiments they had tried. Also, he would have had time to keep the viscosity constant. And as for the switching of solvents and not coming back, the less said of that the better.

All in all, we could show that the extra man's salary that had been saved over the six-month period had been completely lost in the last two weeks. Financially they had not gained a penny. Sales-wise, they had made many customers unhappy by the poor finish on their products and the delays in delivery.

They promised to reform. They put another man in the paint shop, and our predictions were confirmed. Their Stubborn John troubles have ended. I have made only routine calls at this plant for the last several months.

What happened to the "Guardian of the Payroll"? Why nothing. He owns the place.

Heat is Necessary

WINTER often brings trouble to the finishing room. This applies especially to plants located in cold climates. Organic finishes will not dry properly within a reasonable productive period if the temperature of the finishing room is consistently below 70° F. If it is impossible to maintain a fairly uniform average temperature of 74° to 75° F. in the finishing room, then it is advisable to resort to the use of ovens, even for wood products where temperatures of 100° to 125° F. are frequently used to properly dry the finish. If wood products are involved it may be advisable to place humidifiers in the drying ovens in order to maintain a relative humidity in the oven of 15% to 30%.

Products to be finished should be up to a room temperature of at least 70° F., before any finishing materials are applied. This precaution applies especially where unfinished parts are brought in from an unheated warehouse.

This brings us up to the finish material. Due to lack of heated storage space, some firms store their drums of finishing material outside the factory or in an unheated shed where it is subjected to sub-freezing temperatures. Sometimes these conditions cannot be avoided; however, requirements should be anticipated far enough in advance so that drums of material may be brought into a warm room so that the entire contents of the drum will be about 70° F. before being used. [*Cont'd on page 60*]

A NEW
AIR-POWERED
DETROIT *Easy* FINISHER

The new Model AF, a fitting companion to the Easy *Electric* Finisher line—a full size, single pad, production air sander! Its genuine *reciprocating* action (*not* orbital) produces the perfect finish without hand clean-up of swirls, etchings or other objectionable abrasive scratches. A water connection for wet work, pads for flat or curved work, make the new Easy Model AF ideal to do your job better . . .

- **STRATE-LINE ACTION** works up to right angles, no abrasive scratches, no hand clean-up.
- **SINGLE PAD,** full size, proven most convenient, uses ⅓ standard sheet sandpaper, 3⅔" x 9"
- **COMFORTABLE GRIP,** feather-touch palm-pressure start-stop control; front knob for extra convenience.
- **LIGHT WEIGHT**—under 6 pounds—but full sized, not a miniature.
- **SMOOTH,** vibrationless mechanism for efficiency and ease of operation.
- **ALL-NEW QUICK GRIP** abrasive holder for instant attaching of up to 12 abrasive sheets.
- **PADS OF FELT,** rubber or composition for all sanding, rubbing and polishing jobs.

Write for latest literature and name of your nearest Easy dealer.

DSM DETROIT SURFACING MACHINE COMPANY
1268 E. Eight Mile Rd. • Detroit 20, Mich.

If a paint heater is used in the line between the pressure tank and the spray gun, it may be well to install a pre-heater between the pressure tank and the paint heater so that material pumped from the pressure tank will be heated to about 100°F. before it enters the paint heater. In this way the paint heater will only have to raise the temperature of the material 75° to 90° F., to bring it up to 175° to 190° F. at the paint heater. Heat loss between the paint heater and spray gun may be about one degree for each foot length of hose. Of course this may be greater or less depending upon the temperature of the finishing room.

If a preheating tank is included, it is advisable to use insulated pipe from the pressure tank to the preheater and thence to the paint heater. In this case it is advisable to install the filter between the pre-heat tank and the paint heater, and use a circulating system wherein the material circulates between the paint heater and the pressure tank.—*A. A.*

Two Engineers Join L. A. Industrial Concerns

Industrial Systems, Inc., and its manufacturing affiliate, Vapor Engineering Corporation, with plant and offices located at 5615 Leeds St., South Gate, Calif., announce the addition to their organizations of Mr. John Florance and Mr. Herbert Moses.

Mr. Florance is widely recognized on the Pacific Coast as one of the leading high temperature furnace designers and will assume the position of Chief Design Engineer for Industrial Systems, Inc.

Mr. Moses, who was formerly assistant plant manager and in charge of production for one of the Southern California major automobile assembly plants, will assume full charge of manufacturing for Vapor Engineering Corporation.

The two corporations specialize in engineering, manufacture and installation of complete industrial manufacturing systems or components such as ovens, furnaces, painting units, chemical cleaning or surface treatment equipment. Their activities center on processes where the application or extraction of heat or moisture or specialized chemical treatment of wood or steel is required.

85% Human Failure Accidents

THE MOTTO sometimes used by the Rotary Club International is "He Profits Most Who Serves Best." It is a thought which can be applied with force to our safety activities.

To anyone active in industrial safety, it appears that most people know how to protect themselves from danger, but that few are willing to practice the principles and precautions which they know to be wise and sound. Unfortunately, this is a general human failing, common in activities other than safety. Certainly, every industrial employee expects his employer to take every precaution for the safety of himself and his fellow-workers. Isn't it strange then that he fails to follow these principles?

It has been found that about 85% of accidents are caused by what we call the "human failure." The other 15% are caused by mechanical failure of some sort. This indicates that a number of us are neglecting to serve our own interests. When we speak of our own interests, we frequently mean the monetary or material interests; but, in this, although dollar values have been placed upon a finger, a hand, a foot, an eye, in fact even a life, who can say what that value should be? I am sure I can't. I do know that no part of my own anatomy is for sale at any price.

It is fairly obvious to all of us that whenever we can help our fellow-worker avoid an accident it will be to his advantage and to ours to do so.

And our employer will profit by our work. Therefore, our fellow-workers, we safety workers ourselves, and our employers can accept with assurance that motto, "He Profits Most Who Serves Best."— *W. W. Flanagan, Safety Engineer, Atlas Powder Co.*

know your PHENOLIC RESINS

PHENOLIC RESINS is a general term covering phenolaldehydes, which are products of coal tar origin produced from cresol, xylenol, resorcinol and related products. Phenolic Resins are one of the oldest types of resins used in the coating industry. These resins possess many unique advantages since they dry to a great extent by polymerization and evaporation of solvents rather than by oxidation alone. Coatings formulated from Phenolic Resins have remarkable resistance, durability, chemical resistance, water resistance, flexibility and adhesion.

Rx

Watson-Standard PHENOLIC COATINGS FOR Metal Finishing

THE alertness of the Watson-Standard technical staff enables us to bring to you Product Finishes which incorporate the latest developments. Our laboratories are continuously striving to improve the present line and to create new products for the metal decorating industry. We are progressive enough to know that no product is perfect. Constant vigilance is needed for improvement.

We invite you to avail yourselves of the facilities of our laboratory know-how.

• *Write for your copy of article "Vinyl Coatings for the Metal Decorator."*

Watson-Standard CO.

225 GALVESTON AVE., PITTSBURGH 30, PA.

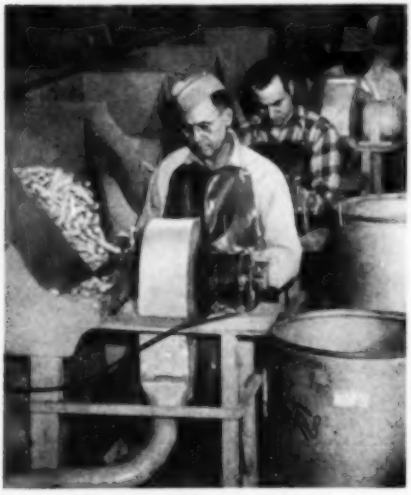
NEW YORK OFFICE: 15 Park Row, New York 38, N.Y. • CHICAGO OFFICE: 55 E. Washington St., Chicago 2, Ill.

INDUSTRIAL FINISHES • PAINTS • PLASTICS • CHEMICALS

Polishing Plastic Parts

TWENTY thousand plastic doll parts are polished in one day at the Ideal Toy Corp., Hollis, N. Y. To achieve this high rate of production, special parts bins, work benches, polishing equipment, and a dust control system have been designed, laid out, and installed.

Polishing not only improves the appearance of doll arms and legs but also removes traces of cement used to join the molded half-sections together. Bins containing unpolished arms and legs are arranged, back to back, in two rows. Work is brought to the bins by the foreman so the operators won't lose working time. The operators in one row face opposite to those in the other. This arrangement permits each man to reach into his bin with the right hand. Bin fronts taper outwards and have V-shaped openings to direct the flow of the bin contents for easy reach of the operator. A lip-tray in front of each bin holds a few pieces of stock from which the operator works. Finished pieces are deposited in a fiber-drum container to the operator's left.



To the left is another row of bins beside which machines and operators face in the opposite direction. Each machine has an exhaust hood piped to the exhaust system.

A large exhaust pipe runs under the bins and is connected by smaller 4-in. pipes to dust control exhaust hoods covering the polishing wheels. This piping system pneumatically conveys dust from the polishing machines to a dust collector on the roof. The system collects the waste dust in a disposal hopper and prevents any dust from escaping into the plant.

The polishing machines themselves are placed on benches between the bins and the finished-parts containers. They comprise electric motors which have discs mounted on their spindles. Ends of strips of sandpaper are secured to the edges of the discs and the free lengths hit against the arm or legs being polished as the spindles rotate.

These machines, plus a carefully planned layout, plus adequate plant-housekeeping, enable Ideal Toy to polish record-breaking numbers of parts in a short time.

Story and photograph supplied through courtesy of the Pangborn Corporation.

Hercules Synthetics News

The opening of a new sales office in Cincinnati, for Hercules Powder Company's Synthetics Department is announced.

Frank W. Beavers, formerly of the department's Cleveland office, is technical representative in the Cincinnati office. Synthetics also will have warehouse facilities in Cincinnati in addition to the present warehouse facilities in Louisville, Kentucky.

The new sales office is located in Carew Tower. Hercules Cellulose Products Department also maintains a sales office in this building.

Mr. Beavers, for the past five years, has been a technical service representative for Synthetics in Ohio, Pennsylvania, Michigan, New York, and Canada.

Whatever your sanding problem...

. . . there's a SUNDSTRAND Straight-Line Action Air Sander to solve it!

Yes, whatever the operation from white sanding through rubbing the lacquer finish . . . the versatile Sundstrand performs it equally well. And it's done smoothly, easily, quickly because the pads reciprocate in opposite directions *for straight line action!* No swirls, no pressure marks . . . no fatiguing vibration! Easily operated by women. Three models to fit your exact needs for finishing large or small areas, sharp corners, confined areas, curved surfaces. To always get a super-fine finish, get Sundstrand.

WIDELY USED FOR: White sanding, wash coat sanding, sealer sanding, rubbing lacquer finish, padding in filler . . . and any other special operations needed for a perfect finish. Write for free bulletin W-52.

SUNDSTRAND

SUNDSTRAND AIR SANDERS

SUNDSTRAND MACHINE TOOL CO.

ROCKFORD, ILLINOIS

DU PONT ANNOUNCES

Amazing new furniture Sealer scratch resistance and clarity. gumming sandpaper, conceived a perfect

Another Du Pont "First." Now, with no change in normal operating procedure, you can take advantage of one of the most exciting advancements in furniture finishing in years . . . DU PONT "TUFCOTE" SEALER. This new Sealer means vastly improved durability, adhesion, and clarity of the finish.

The development of this new Sealer is an example of the ingenuity of Du Pont Finishes chemists. In the past, furniture sealers have had to be friable enough to be sanded rapidly by commercially available papers. So Du Pont went to work on the sandpaper problem. The result is a new sandpaper, conceived in Du Pont Laboratories and commercially developed by a leading sandpaper manufacturer. This new sandpaper prevents abraded particles from sticking to the sandpaper and "gumming it up."

Du Pont Company,
Finishes Division, Wilmington, Delaware

I'd like further information about, and a demonstration of, the new finishing team of Du Pont "Tufcote" Sealer and the new non-gumming sandpaper.

*Name*_____

*Company*_____

*Address*_____

Send coupon for further information and demonstration at your plant

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

NEW "TUFCOTE" SEALER

provides greater toughness, New Sealer and new non- in Du Pont Laboratories, make combination

The development of this new sandpaper made it possible for Du Pont chemists to develop a sealer with all the qualities long desired by the furniture industry.

A Perfect Team: Since we are not, and have no intention of becoming, sandpaper manufacturers, the idea is being made available to the *entire* sandpaper industry—and this unique sandpaper is now commercially available in the usual "finishing paper" grades. Together, the new sandpaper and Du Pont "Tufcote" Sealer make a perfect furniture-finishing team . . . another major contribution to the furniture industry by Du Pont.

Consult the Du Pont Sales Technician in your area about new clear "Tufcote" Sealer, the product that adds so much to furniture finishes without requiring any change in your finishing operation.

E. I. du Pont de Nemours & Co. (Inc.)
Finishes Division • Wilmington, Delaware

DU PONT *Furniture Finishes*

Hot Spray Lacquer

LACQUERS based on nitrocellulose are currently attracting much interest because of the process of applying lacquer known as "hot-spray." This process, which recently has received wide attention, consists of heating the lacquer to bring it to the correct viscosity point for spraying, rather than adding more solvents to the lacquer mixture.

Through this new technique, the excellent qualities of lacquer as a finishing material have become available for many products where lacquer previously was considered a luxury finish. The potential market for lacquer thus has been greatly broadened as a result of the lacquer industry's extensive promotion efforts to acquaint end users with the hot-spray lacquer process.—*Hercules Powder.*

Safety in Colors

OFFICIALS of the King Fifth Wheel Co. plant in Philadelphia, after an intensive survey of both workshop and offices, decided that a general "face-lifting" within the plant would work wonders for both morale and health of employees. They consulted color and paint experts and arrived at a paint scheme which, when completed was welcomed by all the employees.

In the workshop, all walls are in 2-tone green, the upper half at eye level a soft pastel shade, the lower a hardy forest green. The ceilings are white, providing additional overall brightness. The ground equipment was sprayed a dark green with control handies and switches a bright red for convenience and safety. Overhead cranes and hoists are yellow, and all safety switch boxes brilliant orange, distinctive coloring for such emergency equipment.

The same 2-tone green wall effect is carried into the offices along with the white ceilings.

With this complete spray project, King Fifth Wheel hopes to keep job monotony, occupational fatigue and minor ailments like headaches and eye-strain to a minimum among its employees and improve upon its impressively low record of absenteeism.

Naz-Dar Appoints B. H. Secord as Chief Chemist

Mr. B. H. Secord has been appointed Chief Chemist of the Naz-Dar Co., according to Mr. Parmele, Naz-Dar's president. At the same time the research laboratories have been expanded. Equipment to speed the development of new improved inks has been installed. Other apparatus to pre-test inks before making field tests is now being used.

For Star Chemical, Hardesty is Ind. Technical Consultant

The Star Chemical Co., 4500 W. Cermak Road, Chicago, Illinois, manufacturer of a complete line of finish patching materials since 1916, announces the appointment of Mr. Herman Hardesty as Consultant Technical Advisor, heading its industrial division.

Mr. Hardesty is well known in the furniture manufacturing field for his knowledge of production patching problems and their remedies. In his newly appointed capacity, he will be available for consultations and advice to help manufacturers with their patching problems which are a big factor in production today.

Mr. Hardesty is capable of setting up full patching procedures, depending on the problems in the various plants, and can give valuable assistance in the proper training of personnel and proper materials required in each case.

New Wet Blasting Machine Described in Bulletin

A new machine for wet abrasive blasting is described in a 4-page bulletin just published by American Wheelabrator & Equipment Corp., 555 S. Byrkit St., Mishawaka, Ind. The Liquamatte, which uses a vertical-type pump for slurry recirculation and compressed air for propelling the slurry at the work, is intended for all cleaning applications in chemical and metal-working industries where close tolerances must be maintained or where the breakdown of sharp edges or corners must be avoided.

BEHR-MANNING FOR *NEW* NO-FIL® ABRASIVES

A major advancement in abrasives for the furniture industry! New non-loading papers promote faster, better sealer sanding.

BEHR-MANNING is pleased to announce the addition of these great new non-loading finishing papers to its long list of firsts in abrasives.

Because they are self-cleaning and don't gum up, these new NO-FIL abrasive papers are perfect teammates for the new tough, scratch-resistant type sealer. Together, they enable furniture manufacturers to produce finishes with far better clarity, toughness and adhesion than ever before – without any change in present finishing operations – and with big savings in time, labor and paper.

The new papers are available in NO-FIL Garnet and NO-FIL Durite in the same wide grit range that has always been a feature of the regular Behr-Manning line of Garnet and Durite abrasive papers.

You can get full details and a demonstration of this revolutionary new furniture finishing team from the Behr-Manning Field Engineer in your territory. There's no obligation – just sign and mail the coupon.

BEHR-MANNING
CORPORATION
a division of NORTON Company

▲ COATED ABRASIVES
▲ SHARPENING STONES
▲ PRESSURE-SENSITIVE TAPES

Behr-Manning Corporation
Troy, New York

I'd like further information, and a demonstration, on the new finishing team of NO-FIL Coated Abrasive Products and the new tough, scratch-resistant clear Sealer.

Name _____

Company _____

Address _____

The Theory and Practice of FINISHING FURNITURE

Part IV, Lacquers, Varnishes, Enamels

MODERN CELLULOSE-type lacquers are widely used in furniture finishing. They consist of nitrocellulose (or other cellulose esters and ethers), resins (hard and soft) and plasticizers or softeners, dispersed in a suitable solvent combination. A finish coating of such lacquers dries to a glossy luster. If a dull flat sheen is desired, suitable flattening agents (zinc and aluminum stearates, waxes and fine silica pigments) are ground into the gloss lacquer by the manufacturer.

Furniture lacquers are usually supplied ready for use. They contain from 18% to 30% solids—sometimes more—and they are applied by spraying or dipping. Brushing, except on small areas, is not usually satisfactory. Some lacquers may require thinning with lacquer thinner before they are ready to use.

Lacquers dry rapidly. A lacquer film may be recoated in 30 to 60 minutes after it has been applied. At least two coats are required on the best grades of furniture. Overnight air-drying allows the lacquer film to become hard, so it is ready for rubbing and packing. Force-drying the 2-coat system for one or two hours at 130° to 150° F. accomplishes the same result.

Higher Solids Content in Some New Lacquers

Considerable work has been and is being done in efforts to increase the solids content of lacquers, since that has always been considered a serious limitation. Two coats of lacquer are usually required to give the equal of one coat of varnish or heat-curing synthetic furniture finish. Hot-spraying—where the lacquer is heated to 160° F. or thereabouts when it is sprayed—has come into the industrial picture during recent years. This process permits increases in solids content of materials up to 50% over cold spraying. [*To page 70*]

SPRUANCE QUALITY

SINCE 1906

WOOD LACQUER FOR THE FURNITURE INDUSTRY, IN GLOSS - SEMI-GLOSS - FLAT

This company has always featured a highly specialized and complete line for the furniture industry. Among these specialties are:-

LACQUERS

of high quality — which may be rubbed — having excellent build — will stand cold check and resist alcohol. Their uniformity and hard finish — have been proven in actual production for many years.

SEALERS

— (two types) — one that sands readily in a half hour. It's tough — time saving — satisfactory. The other — is of highest quality — has maximum toughness — holds out the finish, but cannot be sanded for an hour. They are adapted to your preference — your production methods.

Rely on The GILBERT SPRUANCE COMPANY quality for high grade durable finish . . . lasting beauty.

Our research and technical staffs are at your disposal.

INQUIRIES INVITED.

THE GILBERT SPRUANCE COMPANY

PHILADELPHIA 34, PA. • WINSTON-SALEM, N. C.

Recent research indicates that some specially formulated lacquers of high quality can be successfully sprayed "cold" when they have as much as 35% or more solids content. High quality lacquers of 30% to 32% solids are now being used commercially at ordinary room temperatures. Many lacquers are sprayed at 45 to 60-lbs. air pressure, with 10 to 20-lbs. fluid pressure in the tank. The higher the solids and viscosity, the more air pressure is required for perfect atomization and flow. In general, of course, the lowest air pressure possible should be used when spraying, for reasons of economy.

Merits of Lacquer as a Finish for Furniture

Lacquers for use as finish coatings on furniture have a number of merits. Chief among these is their speed of drying. The coating sets so fast that it does not pick up dirt and lint from the air, and it may be recoated in an hour or less.

Lacquers are more print-proof at both room and elevated (150° F.) temperatures than most varnishes, although not more so than urea (synthetic) finishes. Their films are hard, tough and stable, since no oxidation ordinarily takes place. Good lacquer films are hard and tough and wear well. They do not discolor on drying or aging to the extent of ordinary varnishes, which is an advantage in light finishes on blond and near blond furniture.

On the other hand, lacquers suffer in requiring more coats than varnishes, and in coverage (square feet per gallon). The net result is that they are somewhat more expensive than most varnishes, although this differential is constantly becoming smaller. Production economies can frequently wipe out the differential altogether.

Oleoresinous Varnishes; What They are and . . . .

Oleoresinous varnishes are mixtures or reaction products of hard resins and drying oils, cooked together at high temperatures. They contain metallic salts or soaps (chiefly cobalt, lead, manganese, zinc and calcium) to hasten the drying; and solvents such as turpentine, mineral spirits, VM&P naphtha, and others to aid in application.

Alkyd or polyester varnishes are reaction products of polybasic alcohols (glycerine, pentaerithrytol, etc.) and drying oil or resin fatty acids. They also contain driers and solvents. Stronger solvents such as xylol and high-flash naphtha are often required where the amount of oil acids is low. Drying-type alkyds will air-dry or bake satisfactorily. The short-oil (low-oil) types are best for baking. Non-drying alkyds must be modified or hardened with nitrocellulose or with urea or melamine resins in order to air-dry or bake at low temperatures.

Characteristics of Certain Varnishes

Both the alkyd and oleoresinous varnishes are used for finishing furniture. The short-oil oleoresinous types (5 to 15 gallons of oil per 100-lbs. of resin) are preferred because they dry quickly to a hard film which may be rubbed and pol-

The imagination, resourcefulness and experience which enables Reliance to produce the right finish for every job is the big "plus" you get and don't have to pay for.

Reliance laboratories working in cooperation with field engineers are always at your service to develop the finishes that will best meet your requirements at the lowest possible cost.

If you have a finishing problem we would welcome the opportunity to consult with you with no obligation on your part.

For additional information address 4730 Crittenden Drive.

Rely on Reliance

RELIANCE VARNISH CO., INC.

AFFILIATED FACTORIES IN

LOUISVILLE, KY. ROSSY HILL, VIRG.

CHICAGO, ILL. ASHEVILLE, N. C.

ished to a smooth surface. Such varnishes are often called cabinet rubbing, or rubbing and polishing varnishes.

The less oil, the better are the polishing qualities, but in practice extremely "short varnishes" become too brittle. A good average oil length for furniture work is 8 to 12 gallons (per 100-lbs. of resin). The longer types in this range will not take a high polish, and are better for rubbing to a dull finish. Where the most in toughness and durability is required, as on restaurant tables, varnishes in the floor-varnish range (20 to 30 gallon oil length) are sometimes used. For outdoor furniture, spar varnish (above 30 gallon oil length) is required.

Odinary alkyd resins are not used alone for furniture work. Modified with hard resins, they can be used as rubbing varnishes. They dry quickly, but lack fullness and are more expensive than oleoresinous types. Unmodified alkyds that contain 50% oil are good for outdoor use, but the clear films they form dry hard rather slowly.

.... As to Gloss, Drying And Spraying Pressures

Gloss furniture varnishes, properly applied, dry to clear glossy hard films that may be rubbed and polished. A dull-rubbed surface may be simulated without the labor of rubbing by using flat varnish. Such a varnish is generally made by finely dispersing, into some gloss varnish, a flattening agent such as aluminum stearate, magnesium carbonate, silica, waxes, insoluble resins, etc. Flat varnishes may also be rubbed whenever required.

Most furniture varnish coatings air-dry overnight, after which they are ready for rubbing and packing. Some few may be force-dried for two to four hours at 150° F., but they will not withstand much rubbing, and are quite likely to "print" when pressure-packed.

Varnishes are usually sprayed at 60 to 70-lbs. air pressure and 10 to 20-lbs. fluid pressure, depending upon the viscosity of the varnish and the adjustment of the spray gun. Varnishes can be applied by any means—spraying, roller coating, dipping or tumbling. Most of them contain 40% to 50% solids at application consistency.

Urea-Alkyd (Synthetic) Varnishes Have Merits

Urea-alkyd furniture finishes, often called "synthetics", have good properties. They are combinations of urea (sometimes melamine) resins, alkyd resins, hard resins, oils, and plasticizers. They contain, or have added to them at the time of application, catalysts which will cure the urea resin at 125° to 160° F. This curing process converts the urea resin to an infusible, insoluble film which is highly resistant to alcohol, soaps, water and other materials. The film is hard and print-proof.

Urea-alkyd finishes are sprayed at 35% to 45% solids, and one coat over sealer is usually sufficient. The material is sprayed at the same pressure as varnishes, allowed to flash (air dry) or flow for 20 to 30 minutes, and then the film is cured for one to two hours at 120° to 150° F. Other suitable drying schedules are four hours at 125° F.,

HOT Lacquer NEWS

PUBLISHED PERIODICALLY BY HERCULES POWDER COMPANY IN THE INTERESTS OF BETTER FINISHES AND FINISHING

Hot-Spray Lacquer at Air-Way Speeds Normal Drying Cycle

Guesswork Eliminated on Cold Rainy Days

Chief Engineer Boyd of Air-Way Electric Appliance Corporation, Toledo, Ohio, is enthusiastic about the improved results of hot-spray lacquer over the cold lacquer finish formerly used.

One coat of hot lacquer is now sprayed on unprimed aluminum. Then the splatter finish is effected by applying a splatter of solvent. The vacuum cleaner body then passes through a twenty-foot bank of lights and emerges tack-free, *regardless of weather.* Formerly, when cold lacquer was used, the finishing foreman had difficulty on cold, damp days because special thinners had to be formulated so that the coated vacuum cleaner would be tack-free by the end of its normal drying period.

Mr. Boyd adds that Air-Way now gets better "mileage" than formerly for same production schedule, which he attributes in part to lower atomization pressure and resultant less overspray.

Air-Way vacuum cleaner bodies dry uniformly, regardless of weather, now hot-spray lacquer process is used.

NEW MILITARY LACQUER SPEC.

A new military specification for lacquer is now issued and official. Identified as "Military Specification MIL-L-11195 (ORD) Lacquer, Lustreless, Hot Spray (For Ammunition)." Hercules will send you full information on hot lacquer, types of heating equipment available, and the performance record of hot lacquer in many industries.

HERCULES POWDER COMPANY
Cellulose Products Department
928 Market Street, Wilmington, Delaware

CL51-16

and overnight (15) hours at 110° F. After cooling for 30 minutes the film can be rubbed and cleaned up, or rubbed and polished.

Drying; Solvent Resistance; Gloss and Flat Sheens

Some recent developments in urea finishes include materials that will air-dry overnight just like varnishes. After an overnight drying they can be rubbed; they are quite print-resistant, and fairly resistant to solvents, such as alcohols. This solvent resistance gradually increases until it ultimately approaches that of the force-dried finishes. Such materials often shrink upon aging, but they are finding some use despite this and some other minor objectional features.

Urea-alkyd finishes for furniture are supplied in gloss and in flat sheen. Although much more expensive than lacquer per gallon, they are often more economical because they have better coverage and one coat suffices, where two coats of lacquer would be required.

"I know it sounds silly, but my doctor told me to spray my throat."

These finishes are best applied by spraying, but they can be roller coated or dipped too. They do not brush satisfactorily because they set too quickly.

In common with lacquers, urea finishes are especially adapted to high-speed furniture finishing on a conveyor line, where suitable drying ovens are available.

Color Enamel Finishes; Where, Why and How Used

Enamel finishes are used on much of the kitchen and breakfast room furniture and, to a limited extent, on some bedroom furniture.

Enamels and enamel undercoaters for furniture are made on a lacquer, oleoresinous varnish or alkyd basis. They are made by grinding into the clear vehicle various hiding and extender pigments. Their formulation and manufacture calls for highly developed skill.

Enamel Undercoaters; Their Functions and ....

Enamel undercoaters (sometimes called primers or primer surfaces) contain a high proportion of pigments; the films they produce are dull and sand quickly to a smooth surface. This high pigmentation also prevents absorption of enamel by the wood, so the undercoater functions as a sealer too.

Because their pigments are likely to settle fairly rapidly in storage at application consistency, enamel undercoaters are usually shipped as

CUT FINISHING COSTS-INCREASE PRODUCTION
with BARRETT'S "WONDER" LACQUERS

New! **WONDERHOT**

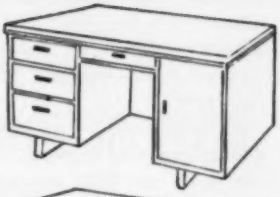
A BETTER HOT SPRAY LACQUER

Finishers of case-goods, radio and TV cabinets, and all fine furniture will find BARRETT'S WONDERHOT LACQUER the perfect solution for increasing production while maintaining high standards of craftsmanship.

WONDERHOT offers the economy and speed of hot spray methods, provides, at the same time, all the advantages—the durable quality—of slower, more costly multiple-coat finishes.

WONDERHOT requires no agitation before or during application, produces a lustrous sheen without hand rubbing. Here, indeed, are time and money saving features!

The flatting agent in WONDERHOT is not affected by heat. Depend on results of highest quality with WONDERHOT—everytime! Available in flat, gloss and semi-gloss, in either 35% or 30% solids. Can be rubbed if a piano finish lustre is desired.



BARRETT'S WONDERFLAT LACQUER

An old favorite with finishers who demand consistent high quality—complete uniformity! BARRETT'S WONDERFLAT, a cold application flat lacquer, imparts a smooth rubbed sheen without rubbing. Because the flatting agent stays in suspension indefinitely, no agitation is required.

Finishers who prefer a cold spray lacquer will appreciate easy handling, satin smooth WONDERFLAT LACQUER.

TRY BARRETT'S "WONDER" LACQUERS AT OUR EXPENSE! Write on your company letterhead for free samples of WONDERHOT and WONDERFLAT. Please specify sheen desired and indicate whether you have heating equipment. Let us prove, at no cost to you, how BARRETT'S "WONDER" Lacquers can cut your finishing costs and speed production!

Barrett Varnish Company

1532 S. 50th COURT CICERO 50, ILLINOIS

a complete line of dependable industrial finishes since 1870

heavy liquids that require reduction with a suitable thinner before application.

Lacquer undercoaters for wood are sprayed at about the same air and fluid pressure as clear lacquers. They dry to sand in about 30 to 50 minutes.

Varnish and alkyd types of undercoaters spray at 60 to 70-lbs. air pressure and 10 to 12-lbs. fluid pressure. They air-dry to sand in two to four hours, or force-dry in about one hour at 130° to 140° F. These undercoaters may be supplied in the color desired by the manufacturer.

Solid-hiding undercoaters on wood are dry-sanded smooth with No. 5/0 or 6/0 sandpaper before enameling. Care must be taken to see that corners or edges are not sanded through; otherwise holdout and hiding on these areas will be inadequate.

Woods That are Finished With Color Enamels

Because the surface is completely hidden, the cheaper, small-pore woods, such as poplar, white and yellow pine, fir and others are often used for enameled furniture. If large-pore woods (oak, chestnut, etc.) that require filling in clear work, are employed, then they should be filled before an undercoater is applied. The undercoater alone will not produce a smooth surface over such woods.

Enamels are formulated with smaller amounts of pigments (which usually hide better than those used in undercoaters) in order to dry to a high gloss or to a semi-gloss, or to a somewhat flat and smooth surface. Like undercoaters, they are usually shipped at a heavy consistency to minimize settling.

Lacquer, varnish and alkyd enamels are sprayed at about the same conditions as the corresponding undercoaters. Lacquer enamels air-dry to recoat in 30 minutes to two hours, and to pack or to rub in 15 to 24 hours, or they may be force-dried for one to two hours at 130° F. Varnish and alkyd types air-dry in 24 hours or force-dry in about eight hours at 130° to 150° F.

Varnish and alkyd type enamels may be applied over any type of undercoater, but lacquer enamels are applied only over lacquer undercoaters.

The usual enamel finish consists of one coat of undercoater and one or two coats of enamel. On furniture some decoration is often used, such as stenciling, shading, highlighting, decalcomanias, striping, or antiquing. The antiquing is done by applying glazing stain over the enamel and blending out. Naturally the flat surfaces are wiped clean, and only a little of the glaze is left in turnings and carvings.

Editor's Note: Part V, to be published next month will include Suggested Finishing Systems.

J. W. Ten Eyck Elected V. P. of Schaefer Varnish Co.

It is announced by T. F. McGuire, President of The Schaefer Varnish Co., Inc., of Louisville, Kentucky, that James W. Ten Eyck has been elected Vice President in Charge of Sales for the company.

Mr. Ten Eyck, who first became associated with the company in 1938, has spent his entire business life in the protective coatings industry. He first became identified with the industry in 1925.

NEVER BEFORE -- SUCH LABOR SAVINGS!

LEARN FIRST-HAND WHAT A COMPLETE KOCH FINISHING SYSTEM CAN DO IN YOUR PLANT

The day you call in a KOCH finishing expert is the day you'll learn how much more profitably you can run your manufacturing operation. A complete KOCH finishing system offers you labor savings up to 50% . . . an improved finish for your product . . . a smooth, efficient conveyorized production that lowers costs and returns a good dividend on the investment. Get the complete facts NOW!

PHONE, WIRE OR WRITE TODAY!

GEORGE **KOCH** SONS, INC.
EVANSVILLE, INDIANA

Cure Mildew Trouble

Our attention has been called to the Q. and A. on page 94 of December 1951 issue, regarding mildew on bamboo.

We make a product known as "Hyagen" that effectively kills mildew and acts as a preventative for a long period. It is used by the US Army for the preservation of leather in shoes, etc., and also for preventing certain fabrics from becoming fouled in the tropics.

There are a whole string of mildews and algea. Every now and then a certain strain is found that the usual bactericides do not touch. Bichloride of mercury is a highly poisonous chemical and we are surprised that its use is allowed industrially. It does kill many types of mildew. Why, in the case of the concern mentioned, it does not prove effective—that is just another one of the cases where common chemicals do not prove effective.

We have a feeling that "Hyagen" will be found useful in that it is a "wetting agent" as well as a fungicide. It will get into and under the colonies now giving trouble. It is an aqueous solution. After spraying the strips with "Hyagen" they will have to be allowed to air dry. This leaves a fine deposit of the chemical in and on the work to act further as a preventative. This deposit will not prevent a finish from adhering to the treated surfaces.

In place of lacquers or oil paints, why not use a "rubber-base" coating . . . . one which is made up of chlorinated rubber? This in itself will tend to discourage mold. We have used this material (made by a prominent concern) very successfully in wet places and under water, and find that mold and algea won't grow on it.

This might also be the finish "N. D.R." would find useful for the fishing poles (see Q. on same page). We will gladly convey the necessary information to each of the troubled people if they address us.—*The Miami Products & Chemical Co.*

Finish for Decorated Hardwood Trays

We are a small firm engaged in decorating and marketing trays and plates made of exotic woods. These plates come to us already sealed and sprayed with three or four coats of lacquer. On some of the plates we silk screen a design in lacquer and then finish them with two or three coats of lacquer. Some of these trays are hand decorated in oil paints and over these we must put some finish other than lacquer. What we want is

Serving THE SOUTHEAST

- LACQUERS
- SEALERS
- FILLERS
- TONERS
- GLAZES
- PIGMENTED WIPING STAINS
- NGR STAINS

Complete Technical Service At Your Disposal

SNYDER BROTHERS COMPANY

Manufacturers of Quality INDUSTRIAL LACQUERS

P. O. BOX 348 — TOCCOA, GEORGIA

STAINS GLAZES

LACQUERS
SEALERS
FILLERS
ENAMELS
UNDERCOATS
SHELLAC

•

SPECIALTY FINISHES

For Application by All Methods

•

Stains and Glazes to produce all modern or traditional colors with rare attractiveness. Specially formulated to give easy application with quick, dependable drying.

Industrial Finishes in Step with the Times

JAMES B. DAY & CO.

CHICAGO 14

FAMOWOOD ... *the AMAZING* ...

ALL-PURPOSE PLASTIC for wood finishes!

Applies like putty... Sticks like glue!

FAMOWOOD is the answer...where wood finishes are important. Simple to use... efficient, lasting, time-saving, when filling wood cracks, gouges, nail and screw holes or correcting defects. Dries quickly, does not shrink. ***Stays put*** under adverse conditions. FAMOWOOD sands easily, does not gum up sander. ***Takes spirit dye stains freely.*** Waterproof and weatherproof when properly applied. Ready to use— ***"right out of the can."*** Fifteen matching wood colors ...with amazing matchless wood finishes.

USED BY FURNITURE MFGS • SASH AND DOOR MFGS
CABINET MAKERS • CONTRACTORS • BOAT BUILDERS • PAINTERS
AIRCRAFT PLANTS • PATTERN SHOPS • HOME BUILDERS • ALL WOOD PRODUCTS

FAMOWOOD descriptive literature & price list on request. Distributor & Dealer inquiries invited, write Dept. IF-1

BEVERLY MANUFACTURING COMPANY 9118 SOUTH MAIN STREET LOS ANGELES 3, CALIF.

Manufacturers of...FAMOWOOD • FAMOGLAZE • FAMOSOLVENT

a finish that is resistant to alcohol and mild acids; one that can be sprayed and that will dry quickly to a satin finish or a rub-tone finish—something without a high gloss.

Can you advise us in regard to our problem? We should like an alcohol and acid-resistant surface on both the lacquer finish and the finish over the oil painting—and both must be without a high gloss.

Could you please tell us what you would recommend and how many coats of both finishes we should use for a fine quality finish?

We have recently heard of a finish called Super Kamex and wonder if you could advise us concerning its merits. Could this be used over both the lacquer and the oil paint.—*L.G.*

Inasmuch as the trays and plates are already coated with sealer and three or four coats of lacquer of unknown composition, I could not recommend any further coating without laboratory tests, as any coating suggested may have no satisfactory adhesion to the particular lacquer and oil paints used.

I suggest that you contact a finishes manufacturer who will work closely with you on this problem. You might do well to find out (from your supplier of plates) what lacquers are already on the plates; the manufacturer of that lacquer might know what top-coating lacquer to suggest.

Offhand, it seems that the trays are getting more coats of finish than are necessary, but again, all the details must be known to work on a system using fewer coats.

Probably that most practical and satisfactory solution for your problem would be obtained by calling in a reputable finish manufacturer's representative. Let him come in person and

see just what you are working with. He may or may not have to send one or more sample trays to his firm's laboratory for tests. In any event he will eventually come up with recommendations that should take care of your requirements perfectly.—*E.V.G.*

In reference to "Kamex" (a lacquer) one of our directories shows this to be a product of M. L. Campbell Co. Listed in the directory is another product of the same company; it is called "Super Komex"—a varnish. —*Editor.*

Misleading Statements in Furniture Article

In the October 1951 issue of this magazine there is an article "The Theory and Practice of Finishing Furniture, Part I". I think you should know that this article contains some erroneous statements of fact and erroneous conclusions. I shall particularize.

There is a long discussion of the function of finishes in excluding water and moisture. So far as the moisture part of the discussion is concerned, the final conclusion is misleading. In those cases in which interior surfaces of furniture are coated, the film is so thin as to have little value as a barrier to water vapor. Protecting only one surface of lumber from water vapor is of little advantage. This is the only logical conclusion from statements in the article itself, but the article seems to draw the opposite conclusion.

The discussion of penetration, adhesion and toughness is also misleading. In the first place the structure of wood is such that there is no substantial penetration of non-volatile matter vertical to the wood grain. Volatile solvents penetrate rather freely, and thin oily materials to a moderate

PRODUCTION PATCHING PROBLEMS!

• We are announcing the opening of a new department that will be devoted exclusively to industrial production finish problems! Your problems, however complicated, can be made far simpler with the correct materials and training.

• We are ready now to furnish all materials required for any type patching problem, and the personnel to help you with your training programs is available to you.

• Nu Glo Sticks • Stains
• Padding Materials • Solvents
• Lacquers • Burn-in Materials

STAR CHEMICAL CO., Inc.
4500 W. Cermak Rd.
CHICAGO 23, ILL.

Spe-de-way
WOOD BLEACH
This single operation, controllable, Patented Bleach

• Requires No Neutralization
• Does Not Raise the Grain
• Leaves No Deposit
• Wood Is Left Neutral
• Economical . . . Dependable

Gallon Unit makes two gallons of bleaching solution. Application by spray or synthetic rubber sponge. Wood is ready for finishing in less than two hours.

Delivered prices quoted on request.

Spe-de-way Products Co.
manufacturers
3639 N. Columbia Blvd., Portland, Ore.

SPECIALIZATION
Saves You Money

on THINNERS

We make nothing but Thinners—blended Solvents, and nothing else. Naturally, we buy large quantities of solvents—at lowest prices. *Specialization* saves us money on overhead too—and these savings we pass on to you, our customers.

We know how to formulate Thinners to your requirements—been doing it for 26 years. We've satisfied big and little customers . . . let us show you how a Lacquer Thinner *SPECIALIST* can supply you with the *right* Thinner . . . and still save you money.

Just fill out form below and mail today. We'll work out a Thinner *especially for you*, and send a sample. Think we can do it for 85¢ or less a gallon too!

POTTER PAINT CO., INC.
CORTLAND, N. Y.
THINNER SPECIALISTS

The product we make is:_____
We use Lacquer Thinner for:
☐ Spray ☐ Dip ☐ Cleaning ☐ Other_____
We use Lacquer Thinner on:
☐ Metal ☐ Wood ☐ Other_____
We want it to dry:
☐ Fast ☐ Slow ☐ Medium

Name_____
Address_____
City_____ Zone_____ State_____

extent. Materials like nitrocellulose lacquer, which "set" quickly to a gel state, do not penetrate at all. Coatings do flow into the shallow cavities created when the surface layer of cells are laid open by sawing or planing and this promotes anchorage, but it is not penetration. The filling operation pretty well takes care of these small cell cavities.

Adhesion is a phenomenon that occurs where two surfaces meet; in this case, the wood and the coating. Any coating material that may penetrate is no longer at the surface, and, therefore, has no bearing on adhesion. This is the reason why one of the properties most desired in glues is non-penetration. It is also significant that good paints show excellent adhesion to smooth steel surfaces, which certainly do not permit penetration.

Some problems are of such nature that no conclusive determination is possible and there is legitimate room for differences of opinion. Other questions are of such nature that definite facts can be established which permit only one reasonable conclusion. This is true generally of the physical and chemical sciences.

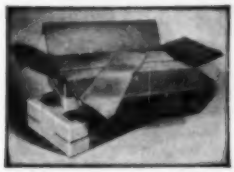
In any field of science, as basic facts are established, the room for disagreement is narrowed. Sufficient facts have been established in the coatings field that there is no disagreement among well informed technical men on many subjects. One such subject is the general relationship between wood structure and penetration and between penetration and adhesion.

In Part III of "The Theory and Practice of Finishing Furniture", in the December issue, there is a statement that certainly does not lend itself to difference of opinion. The author states, "The material for a wash coat usually consists of a lacquer sealer or shellac at 5% to 10% solids . . . ."

Our standard wash coat lacquer

NOW! Tack Cloth in Handy Rolls *or* Cut Bulk

Cut off any size piece and use as needed.



Already cut and folded, ready to use.

Now you can get Tack Cloth packed the way it's easiest for you to use—either in 150 yard rolls of 36" wide cloth or in handy cartons—100 or more Tack Cloths to the carton.

No matter which way you buy it, you can be sure that every square inch will **stay** SOFT and TACKY until the very last bit is used up.

The Cut Bulk size is 18" x 36"—folded to 4½" x 18" for easy handling. **All of our Tack Cloth is Spontaneous Combustion-Proof, Lint-Free and Wax-Free.** It's clean and sanitary—there's no waste.

Write today for complete information, prices and samples.

Baughn Chemical Products Company
"The Tacky Wiper Specialists"
7027 N. RAVENSWOOD CHICAGO 26, ILL.

Also Individually Packed in Glassine Envelopes —144 to the Carton.

A WARRANTY OF SATISFACTION IN EVERY CARTON

contains approximately 3% solids. The last competitive sample we examined was received in August, 1951, and contained 5.7% solids. The previous competitive sample which we tested was received in January, 1951, and contained 3.3% solids. The usual and typical range of solids for wash coats is 2½% to 6% rather than 5% to 10%. This is a matter of fact, not of opinion. The article makes no reference to special wash coats supplied by the lacquer manufacturer ready for use, which is rather general practice—much more common than the use of shellac, which is mentioned in the article.

The first paragraph of Part III states that wash coats serve mainly to prevent discoloration of the wood by oils and resins in the filler. Following this it states that in addition it preserves the clarity of the finish, eases wiping of the filler and aids in sanding the surface smooth just before filling. The latter is the main function of the wash coat and applies to finishes regardless of color. The function mentioned first is the less important and applies only to pale colored finishes.—*Wayne R. Fuller, Director of Reseach, Grand Rapids Varnish Corp.*

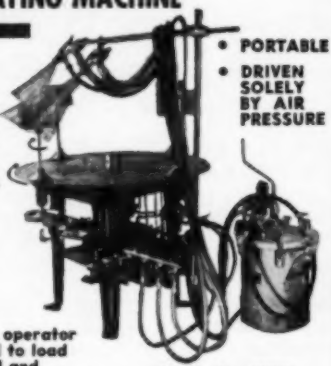
Iridescol Flakes

The iridescent pigment for use in plastics

Price $3.75 per pound, packed in twenty pound drums

Iridescent Pigment Corporation of America
P. O. Box 1605
WILMINGTON, DELAWARE

HOLLAND
automatic-pneumatic.
SPRAYING MACHINE



- PORTABLE
- DRIVEN SOLELY BY AIR PRESSURE

Production up to 1000 pieces per hour

Uses regular exhaust booth

Only one operator is needed to load unfinished and remove finished work.

Write for FREE folder "S"

J. HOLLAND & SONS, INC.
MANUFACTURERS — DEALERS
276 SOUTH NINTH ST. - BROOKLYN, N. Y.

RESTORE PAINT IN 2 MINUTES

PER GALLON WITH
MIRACLE BLUE - BOY
5 GALLON
PAINT REJUVENATOR

Paints, lacquers and enamel products can be restored to their original consistency without opening the can. Units available to handle from ¼ pint to 50 gallon drums. Immediate delivery.

Originators of paint rejuvenating equipment---sixteen years—thousands of satisfied users.

Write for folder & prices

MIRACLE PAINT REJUVENATOR CO.
128 E. 10th Street St. Paul 1, Minn.

Monkhouse is Made V. P. of Shell Chemical Corp.

Mr. G. R. Monkhouse, a 30-year man in Shell companies and formerly General Manager of the Western Division of Shell Chemical Corp., has been elected to the position of Vice President, Western Division. Offices will remain in San Francisco.

Monkhouse began his career with Shell in 1921 as a marketing trainee, served three years in England, four years in India and 23 years in this country, broken only by wartime service in the U. S. Army. He progressed through various marketing positions with Shell Oil to Division Manager; became General Manager of Shell Chemical's Eastern Division; and in 1948, General Manager of Western Division.

T. M. Stokes, V.P. in Charge of Sales for Robertson Co.

Robertson Co., Inc., Louisville, Kentucky, manufacturer of wood and metal coatings, announces the election of Mr. Thomas M. Stokes to Vice President in Charge of Sales.

Mr. Stokes was born in Richmond, Virginia, later moved to Louisville, where he received his grade school education. He was graduated with a degree in architecture from the University of Virginia in 1946. During World War II, he served in the Navy, with the rank of Lieutenant and saw fleet duty in the South Pacific and Philippine sea area.

Prior to joining the Robertson Co., in 1949, Mr. Stokes was a sales representative for another concern in Louisville, Ky. Until his recent election to Vice President, Mr. Stokes has been the Southern Indiana sales and technical representative of Robertson Co., Inc.

Production and merchandising subjects will receive major emphasis at the 21st annual Conference on Packaging, Packing and Shipping, to be held concurrently with the National Packaging Exposition in the Public Auditorium, Atlantic City, N. J., April 1 to 4.

NIKOLAS

SINCE 1890

Your Introduction to FINE FINISHES

For over a Half Century our representatives have shown that Quality finishes can produce lower finishing cost, by greater coverage.

We welcome your inquiry and the opportunity to demonstrate.

FOR INFORMATION, SAMPLES AND RECOMMENDATIONS WRITE—WIRE—OR CALL

G. J. NIKOLAS & CO., INC.

2850 WASHINGTON BLVD., BELLWOOD, ILL. • 33 GRAND ST., BROOKLYN 11, N. Y.

Converting to war work?

TO SAVE ON:

—Cost

—Labor

—Floor Space

—Drier Size (if used)

—Heat Use

—Conveyor Length

Investigate:

The DeBurgh Industrial Conveyor. Same efficiency that has made the DeBurgh Finishing System standard equipment of many of the most progressive furniture manufacturers.

DeBURGH CONVEYORS

Patented and Patents Pending

For Assembly, Finishing and Upholstery

1741 K St., N. W., Washington 6, D. C.

Attractive

Distinctive finishes — skillfully prepared in our Creative Studio— have attracting qualities, too! They are eye-catching, sales-motivating coatings which subtly enhance the fine lines and design of your product. Our capable, highly-trained artists — men who realize the importance of individuality — have the know-how and experience so necessary in developing such finishes. Avail yourself of their creative abilities. Send a sample of your product to be finished at no cost or obligation.

No Tampering with Quality

ROCKFORD VARNISH *Company*
ROCKFORD ILLINOIS

Manufacturers of Protective and Decorative Coatings

Affiliate
GORDON BARTELS CO.
Roller Coating Specialists

Cleaning; Phosphatizing

There is an article in November issue of *Industrial Finishing* which we are interested in. It is on page 44, paragraph 2.

Could you supply us with the names of manufacturers of these compounds, together with the trade names of said products?—*L. Mfg. Co.*

Some of the advertising in that same issue, and in other issues of the magazine, answers your question. In a letter we are naming several concerns that can supply what you want. —*Editor.*

Silk Screen; Flock

We are manufacturers of silk screened and flocked products, and have been referred to you for silk screen and flocking equipment. Literature and blueprints or catalogs, including your price lists for the above equipment would be appreciated. We are especially interested in equipment for the continuous manufacture of flocked paper and flocked materials.—*H. & G.*

In a letter we are giving you names and addresses of concerns who can supply what you desire.—*Editor.*

Roller Coater Equipment

We would appreciate your sending us the names and addresses of manufacturers of roller coating equipment, as described in your August edition of *Industrial Finishing.—T.P.Ltd.*

Information supplied by letter.—*Ed.*

Where's D G Chemical Co.?

We would like to have the address of the Dee-Gee Chemical Co. who make a paint and grease remover called "Sampson". We use this solution to remove paint from spray guns that are brought to us for repair and clean-up.—*S. Spray Equipment Co.*

Sorry, we don't know. These names do not appear in our directory. Can some reader tell us?—*Editor.*

Veiling Lacquer

I am interested in locating a concern that carries a veiling lacquer in stock in one gallon containers.—*B.W.*

In a letter we are naming some of the concerns listed on our reference card marked "Veiling Lacquers".—*Editor.*

For Technical Digest Service

Because of its merit a recent article in *Industrial Finishing* has been selected for the Technical Digest Service conducted by the Office of Technical Services of the United States Department of Commerce under the sponsorship of the Economic Cooperation Administration.

The Digest Service is one part of the E.C.A. productivity program which is designed to assist friendly European nations to attain economic self-

Eliminate "Heavy Overtime"

PEEL SPRAY-BOOTHS CLEAN WITH LIQUID ENVELOPE

Good men are hard to get today. Why waste their time and your money—on the "jack-ass labor" job of scraping down spray-booths? Keep your booths clean, firesafe, better illuminated, better ventilated by using "LIQUID ENVELOPE".

Simply spray on with your regular spray-equipment. When overspray accumulates, break film and peel off in great big sheets. Takes only a few minutes for a 12 x 12 booth. Actually costs less than the hand-labor way. Order a 5-gallon Test Sample (Drum Lot Price on test-sample order!)

BETTEN FINISHES & COATINGS, INC.
268 Doremus Avenue, Newark 5, N. J.
112 Penn 7th St., Los Angeles 15, Calif.

DISTRIBUTED BY

General Spray Equipment Co., Boston, Mass.
Bay State Spray Equipment Co., Springfield, Mass.
Lea Manufacturing Co., Waterbury, Conn.
Edgcomb Steel of New England, Milford, Conn.
Kellerman Paint Co., New York, N. Y.
Grapek Paint Co., Newark, N. J.
M. Buten & Sons, Inc., Philadelphia, Pa.
Dean & Barry Co., Columbus, Ohio
R. W. Renton Co., Cleveland, Ohio, Indianapolis, Ind.
Vic Miner Co., Toledo, Ohio
Abrasive & Supply Co., Detroit, Mich.
Nelson Industrial Supply Corp., Grand Rapids, Mich.
O'Donohue Sales Co., Milwaukee, Wis.
Paints & Lacquers, Inc., Chicago, Ill.
Tanner & Co., Indianapolis, Ind.
Metal Goods Corp., St. Louis, Mo., North Kansas City, Mo., Dallas, Texas, New Orleans, La.
Hubbard & Stau, Los Angeles, Calif.
M. E. Smith Co., Los Angeles, Calif.
C & H Supply Co., Seattle, Wash.
Hugh Russel & Sons Ltd., Montreal & Toronto, Canada

sufficiency through the improvement of production techniques . . . .

To illustrate the digest based on your article, we would appreciate receiving glossy prints (8x10-in. if possible) of the illustrations appearing on pages 50 and 52 of November 1951 issue.—*U.S. Department of Commerce.*

Photographs have been sent.—*Ed.*

Frosted Glass Effect

We note in November issue the following:

"We recently read of a new material for spraying on window glass to make it translucent. It has the same appearance as frosted glass. We would appreciate your advising where this material is available."

We are interested in the same thing. —*Three Imagineers.*

Information supplied.—*Editor.*

Window Glass Frosting

In November issue, Letters from Readers, we noticed an inquiry about "Window Glass Coating" on page 98.

We manufacture a glass frosting which comes in eight colors, namely: white, clear, black, brown, green, red, blue and gold. We are sending you a label of this item which is self-explanatory.—*Worth Lacquer & Chemcal Co., Inc.*

Make Lacquer in India

A concern in New Delhi, India, wants to contact U. S. manufacturers of nitro-cellulose chips and paste. Also wants "an expert and technical consultant who can guide us and help us by giving us his advice on the formulations and machinery required for making lacquers".

Name of the firm will be furnished on request.—*Editor.*

Screen Process Printing

We are Screen Process printers and we enclose a sample of our work on methyl methacrylate . . . .

Sample of English screen printing on glassy smooth surface of a plate of white plastic 1/8-in. thick, 5¼ x 5¾-in. Ball of yarn and lettering are in red; remainder is in black.

If we are able to be of any service to you by way of "tricks of the trade", we shall be happy to place our knowledge at your disposal.—*Geta Plastics Ltd., London, England.*

Bronze Powders Available

We note the publicity for simulated finishes by various manufacturers, insinuating to users that bronze powders, both gold and aluminum are unobtainable, and for which they should use substitutes.

In order that the industrial finishing trade may know otherwise, we wish to point out the following regulations set up by the National Production Authority:

For the first quarter of 1952, users of bronze powders (gold and aluminum) may procure from the manufac-

MAR-PROOF LACQUER

SCHAEFER'S Mar-Proof Lacquer is a performance-proven finish that cannot be easily marred or scratched.

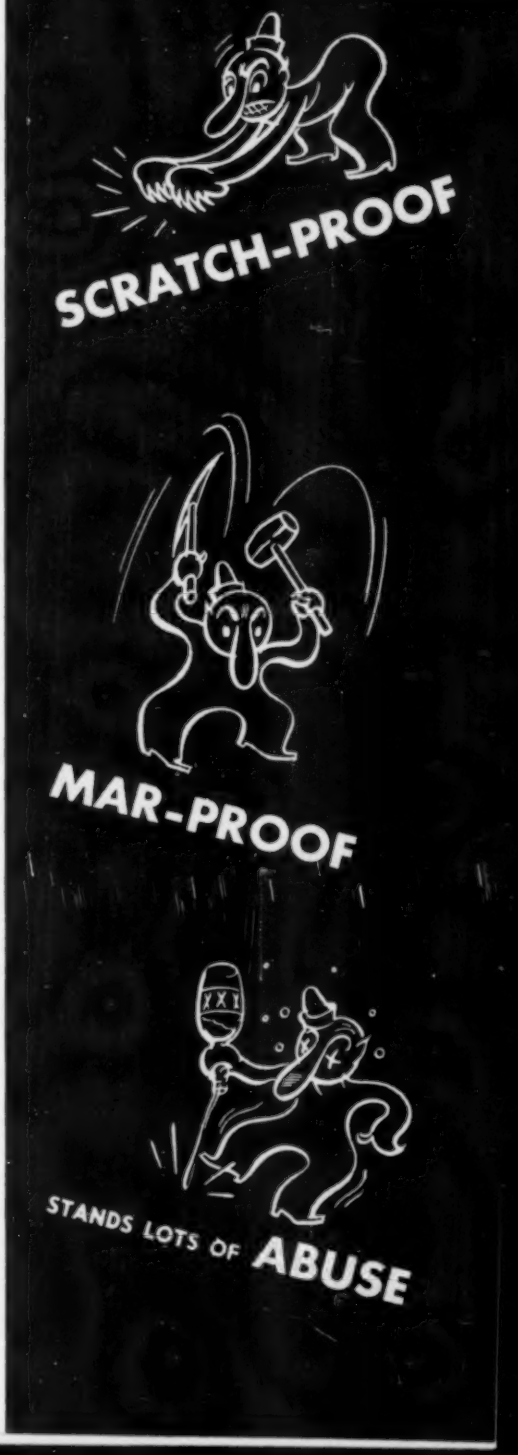
It's tough—tougher than the ordinary lacquers; meets the most critical requirements of current production.

Made in either clear gloss rubbing or satin finish, it produces a splendid transparent coating of full depth on maple, walnut, gum, mahogany and other cabnet woods.

Economical; gives plenty of coverage and dries quickly. Our Mar-Proof Lacquer Sealer is recommended with it for a first-coater.

Working samples furnished without obligation. Write for them!

THE SCHAEFER VARNISH COMPANY, INC.
Louisville, Kentucky



turer or suppliers, up to 500-lbs. of each grade with a Self Certification as set forth under CMP Regulations No. 1. DO-SU is the required symbol for small users.

For the second quarter of 1952 a revised order by the NPA permits the users to Self Certify up to 3000-lbs. of gold bronze powder and 2000-lbs. of aluminum bronze powder (silver finish).—*O. A. Both Corp.*

Front Covers of I.F.

If available, would you forward, at your earliest convenience, two or three front covers of recent *Industrial Finishing* magazine issues, suitable for bulletin board mounting?—*T. P.*

Covers supplied.—*Editor.*

Gold Lacquer Wanted

We are looking for a supplier of gold lacquer (or some similar material with fast-drying properties) for spraying and dipping wooden parts of display stands. Can you furnish information on any special techniques required for working with gold?

In May 1951 issue, on page 96, you mentioned Metallplast Metallizing Process, by Ernest Mueller, Consultant on Metallizing and Plastics. We do not know if this process is what we are looking for, but would like to have Mr. Mueller's address.

It will also be helpful if you can give us names and addresses of manufacturers of gold lacquer products. Any information along these lines will be greatly appreciated.—*D. Co.*

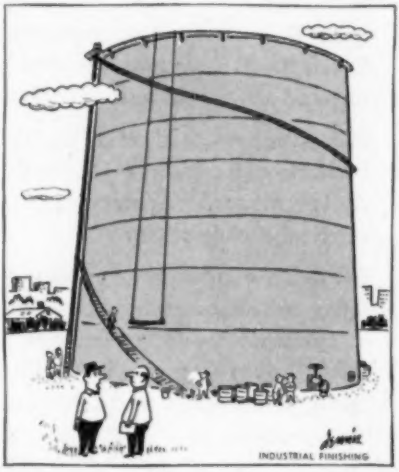
In a letter we are naming several concerns that can supply gold lacquer.

Mr. Ernest Mueller's address is (or was at that time) 29 Howard St., New Britain, Conn.—*Editor.*

"Cast Seal" Wanted

In July 1951 issue we saw mention of a material, "Cast Seal", for impregnating aluminum castings. We would like to know the name of the company that manufactures this material.—*A.E.Co.*

According to our records, "Cast-Seal" can be obtained from Metallizing Co. of America, 3520 W. Carroll, Chicago 24, Ill.—*Editor.*



"We've used all of that 28,000 gallons of paint, Bill; we'll have to order another half-pint to finish the job."

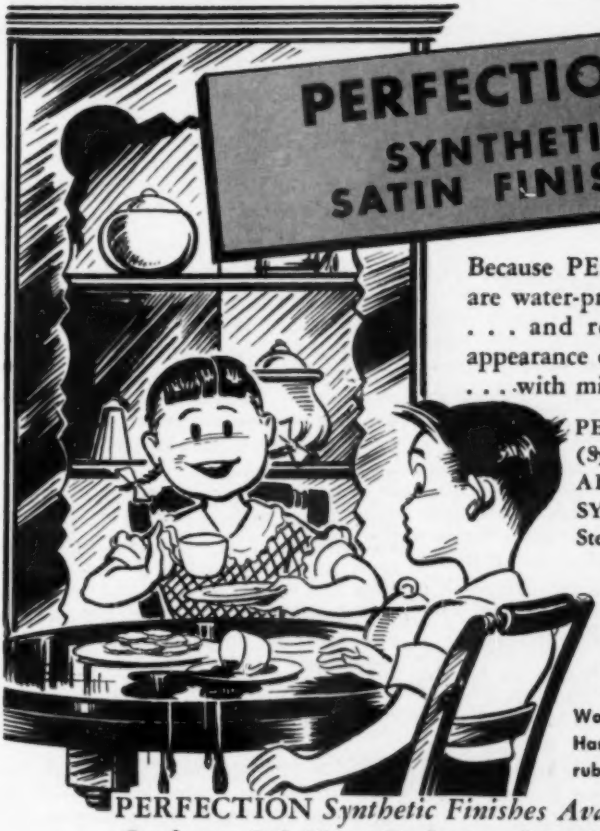
Furniture Show Article

I am pleased and honored that you are counting on me for an illustrated article about the new furniture which will be exhibited at the January furniture shows in Chicago.

You know how I feel about your magazine. It is one of the really fine technical magazines that reaches manufacturers in the home furnishings field. I enjoy doing the article because it is a challenge to do a bang-

Mamas DON'T WORRY

WHEN FURNITURE IS FINISHED WITH



Because PERFECTION finishes are water-proof . . . liquor-proof . . . and retain that beautiful appearance of hand-rubbed finish . . . with minimum care.

PERFECTION FINISHES (Synthetic or Lacquer Type) ARE FLATTENED BY SYNTHESIS rather than by Stearate or Other Foreign Flattening Agents.

Clarity of Gloss Lacquer even in lower sheens • Will either gloss or dull rub • Won't haze or sweat back • Has that rubbed effect without rubbing • Has a waxed feel.

PERFECTION *Synthetic Finishes Available in Grades to Suit Your Budget and Drying Time.*

PERFECTION PAINT & COLOR COMPANY

715 E. Maryland St., Indianapolis 2, Indiana

Perfection SYNTHETIC FLAT FINISHES

WATER-PROOF LIQUOR-PROOF

up reporting job. I go into it carefully and thoroughly and sincerely try to give your readers all the information I think they should have to keep abreast of new developments.—*Rosalie Flank.*

Sanding, Rubbing Machines

Please send us literature on reciprocating motion sanders and portable rubbing machines, as we have a prospect that may be interested.—*A.T.Co.*

Information furnished.—*Editor.*

Sponge for Bleaching

We are interested in finding a synthetic rubber sponge that we could use in putting on bleaching acids. Could you tell us where we can procure a sponge that will resist caustic soda and also hydrogen peroxide?—*T. B. & Co., Havana, Cuba.*

Try E. I. duPont deNemours & Co., Inc., Synthetic Sponge Division, Wilmington 98, Delaware, U.S.A.—*Editor.*

Metallizing Process

When reading "Letters from Readers" in May issue of *Industrial Finishing*, page 96, under the heading of "Metallizing Process," we took note of Mr. Ernest Mueller's offer of his Metalloplast Metallizing Process, and would be interested in same.

We manufacture coat hangers of all kinds. We make our own hooks and then have them nickled outside before assembling to the wooden part. We would like to get in touch with this man to learn further details.—*I.B., Inc. (Canada).*

In a letter we are giving you Mr. Mueller's address.—*Editor.*

Who Makes "Sicon"?

In the September issue of this magazine we saw a small article announcing the development of a new heat resistant paint called "Sicon". We would like to obtain all the information possible regarding this new paint and would appreciate it if you could give us the address of the manufacturer of this coating.—*C. C. Co.*

In a letter we are giving you the page advertisement on "Sicon" appeared in May 1951 issue (page 41) of this magazine.—*Editor.*

Reprints of Flock Article

We would like to get 100 reprints of the article on flock finishing which appeared in March 1947 issue of this magazine. If these are available would you please send them to us at once, billing us for charges?—*R.P.Co.*

Sorry; no reprints of anything that far back. Reprints must be ordered immediately after publication, or the type will be dismantled and dumped into the melting pot; and cuts are promptly junked and worked over to supply much needed copper and zinc. —*Editor.*

Enamel in Pastel Colors

We would appreciate any information as to a source of supply for light pastel shades of baking enamel. We prefer to buy stock material, as we do not use each color in large enough quantity to justify the paint manufacturer making special batches. —*F. Co.*

Couldn't you purchase only white baking enamel and then tint small batches with concentrated color from a collapsible tube, stirring in the

Now.. YOU CAN PRETREAT ALL METAL SURFACES AGAINST CORROSION WITH VINSYNITE

No costly treating equipment necessary . . . Can be used on any size piece, large or small.

One simple application of Vinsynite phosphatizes the metal and leaves a very thin film of organic protective coating which inhibits corrosion; and adheres tight to any metal surface to form a firm foundation for succeeding coatings.

When you use Vinsynite, the size of the piece being treated is not limited by the conventional treating equipment, because Vinsynite is applied like paint—by brush, spray, dip or roller.

Vinsynite must be used in conjunction with a primer-finish system or in some instances with a finish coat only to give long-lasting resistance to corrosion. We have formulated a series of primers and finishes—vinyl, phenolic, chlorinated rubber and epoxy—which give the highest degree of protection when used with Vinsynite.

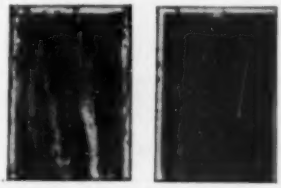
We'd like to give you the full facts on Vinsynite's applications and resistance to corrosion. Write us and we will send you the information immediately.

SPECIALTY COATINGS, INC.

DIVISION OF THOMPSON & COMPANY

1085 VINCENT AVENUE, OAKMONT, PA.

This test proves . . . that Vinsynite systems give amazing protection to metal surfaces under toughest exposure conditions.



UNRETOUCHED PANEL PHOTOS . . . show (1) a badly corroded panel with a coating of oleoresinous paint on bare steel; and (2) the same paint over Vinsynite. Both panels were exposed at same time to 500 hours A. S. T. M. salt spray.

For The RIGHT Job . . .
Use The Right FINISH—
NEW PERIOD
Start with the right finish; and you'll end with a job well done at low cost. That's just another reason why each year, more and more products are finished with New Period Production Finishes.
• Fillers and Stains
• Lacquers—Clear and Semi-Gloss
• Sealers
• Lacquer Enamels—Flat and Gloss
• Synthetic Enamels
Write for 5 Gallon Working Sample at Drum Price
MANUFACTURERS OF FINE WOOD AND METAL PRODUCTION FINISHES
NEW PERIOD Production Finishes
ESTABLISHED 1917
NEW YORK WOODFINISHERS' Supply Co. INC.
109 IMLAY STREET BROOKLYN, N. Y.

color thoroughly so as to make the batch completely uniform?

In a letter we are naming a few firms that might be in position to supply what you want.—*Editor.*

Touch-up Kits

Will you kindly send me the name and address of a concern that sells "Touch-up Kits" for furniture refinishers?—*D. F. G.*

Yes, in a letter we are giving you the names and addresses of three concerns that can supply these kits.—*Editor.*

"Sun Glass" Paint

We are conducting tests on painting the top windows of our rapid transit cars to exclude the sun light. We would like to get the names of paint manufacturers who have a transparent paint that adheres to glass, in either a blue or green tint. —*T. A. Co.*

Who has something suitable for this work? Our reference card lists only one company. There must be others.—*Editor.*

Roller Stamp

We would like to stamp a design on uncoated Masonite in one color. This design is to resemble a roof, door and window, to be printed on individual strips 4-ft. in length. Could you put us in touch with a firm that could make a stamp or roller for us?—*V.Co.*

Can some reader recommend such a manufacturer? We have replied to the inquiry, giving three names from a directory, but are not sure of them.—*Editor.*

A Lacquer of Wonderful Adhesion And Durability For Your Metal Products

- Brass and Bronze
- Aluminum
- Copper
- Silver
- Cadmium
- Chrome
- Zinc
- Bright Metal

Air Dries In 30 Minutes

U.S. Industrial Finishes

Wood and metal products, ranging from hair-pins to locomotives, today are finished with U. S. Industrial Finishes. Our Research Laboratories are at your disposal for solution of your finishing problems.

For samples and details, write:

U.S. Paint, Lacquer & Chemical Co.

— CHICAGO — KANSAS CITY — MEMPHIS — ST. LOUIS —

General Offices: 2117 Singleton Ave., St. Louis 3, Mo.

BOOKS
On Finishing Available

"MODERN ORGANIC FINISHES—Their Application to Industrial Products" (452 pages) new	$8.50
"CHEMICAL FORMULARY" (Vol. IX)	7.00
"FINISHING METAL PRODUCTS"—2nd edition (352 pages)	5.50
"PRACTICAL FURNITURE FINISHING" (112 pages)	1.50
"FURNITURE FINISHING" (543 pages)	4.00
"SPRAY PAINTING"—Industrial and Commercial (160 pages)	2.00
"THE MIXING OF COLORS AND PAINTS" (292 pages)	2.50
"WOOD FINISHING" (361 pages)	2.50
"NATIONAL PAINT DICTIONARY" (704 pages)	7.50
"MODERN POLISHES AND SPECIALTIES" (313 pages)	7.50
"PRACTICAL COLOR SIMPLIFIED" (128 pages)	5.00
"GRAINING"—Ancient and Modern (224 pages)	4.00
"THE SILK SCREEN PRINTING PROCESS" (225 pages)	4.50
"SCREEN PROCESS METHODS OF REPRODUCTION" (252 pages)	3.00
"THE SCIENCE OF WRINKLE FINISHING" (204 pages)	5.00
"THE SCIENCE OF MODERN WOOD FINISHING" (386 pages)	6.00
"PAINT & VARNISH TECHNOLOGY" (509 pages)	8.00
"METALLIC AND NON-METALLIC COATINGS FOR GRAY IRON" (76 pages)	1.75
"PAINT FILM DEFECTS — Their Causes and Cure" (544 pages)	12.00
"INDUSTRIAL SOLVENTS" (764 pages)	12.00

Cash Must Accompany Order—
Send for Descriptive Circular

INDUSTRIAL FINISHING
1142 N. Meridian St. Indianapolis 4, Ind.

Who Makes "Plextone"?

We have seen on the market a finish called "Plextone". We are interested in obtaining the name of a paint manufacturer who produces this paint. If you have this information, we would appreciate your forwarding same to us.—*B. B. C.*

"Plextone" is a product of Maas & Waldstein Co., 438 Riverside Ave., Newark 4, N. J.—*Editor.*

Lacquers; Rubbing Compounds

Please foward us the names and addresses of firms engaged in manufacturing lacquers, rubbing compounds and polishes. Include, please, the manufacturer's name and address of "Anti-Haze" furniture polish.—*S. M. (Mexico).*

All of this information can be found in the advertising pages of any recent issue of *Industrial Finishing.* In a letter we are submitting same to you.—*Editor.*

Who Makes "Coprox"

Please send us the name and address of the manufacturer of "Coprox", a water proofing product. We have not seen this material advertised in your magazine but we hope you will be able to give us the information requested.—*J. M. & C. (San Juan 2, Puerto Rico).*

We understand that this is a product of Coprox, Inc., (Attention Edward Holland), 1270 6th Ave., New York, N. Y.—*Editor.*

Buffing wheels are shown in a folder from United Buff Products Corp., 233 Oak St., Passiac, New Jersey.

Form-A-Roc • *FIRST COAT*

FOUNDATION FOR FINE FINISH

1. **Dries with lacquer speed.**
2. **Has double lacquer solids at spray gun.**
3. **Fills very well—sands easily.**
4. **Adheres tenaciously to steel, wood, presdwood, aluminum, galvanized metal, etc.**
5. **Holds out lacquer, synthetic or oleoresinous enamels exceptionally well.**
6. **Thins 3:1 with xylol.**
7. **Available in GREY, SALMON and OFF-WHITE.**
8. **Ground well to smooth texture.**

MADE BY

THE VARNISH PRODUCTS COMPANY

5206 Harvard Avenue **Cleveland, Ohio**

Used Steel Drums

STEEL DRUMS, in which paint, thinners or oils have been shipped and stored are too valuable to be neglected or discarded. Even though a drum has become battered and rusted it can usually be restored to useful service by a reconditioning process.

Drums can be processed rapidly through a highly efficient production line that often turns out finished drums at the rate of 330 to 360 per hour.

First the drums are washed inside and out with a steam and caustic soda solution. Before the next step they are drained and completely dried. Small portions of the cleaning solution which remain after draining can be sucked out by a hose attached to a vacuum line. In some establishments several of these small vacuum hose stations are serviced by a single vacuum pump operating at about 8-in. of vacuum. This excess solution does not pass through the pump but is trapped in reservoir tanks.

After being well dried, the drums are straightened where needed, sandblasted (in some plants), fitted with new tops and gaskets and painted on the outside. Certain types are given interior coating for added protection. Conveyors carry the freshly painted drums through ovens for quick drying.—*Leiman Bros., Inc.*

Detrex Appoints Bakers Supply Company in Omaha

The Omaha Bakers Supply Co., 1317 Leavenworth St., Omaha 8, Nebraska, has been appointed by the Detrex Corp., Detroit 32, Mich., distributor of its line of specialized pan cleaning chemicals and equipment. The announcement was made by C. F. Dinley, Jr., Manager of the Bakery Division.

New Finish for Polystyrene

Development of a new plastic finish for polystyrene, C 5138, that is expected to expand the use of polystyrene in a wide variety of products, is announced by the United Lacquer Mfg. Corp., Linden, N. J.

When applied to polystyrene by dipping or by spraying with standard equipment, C 5138 flows easily and results in a smooth lustrous finish.

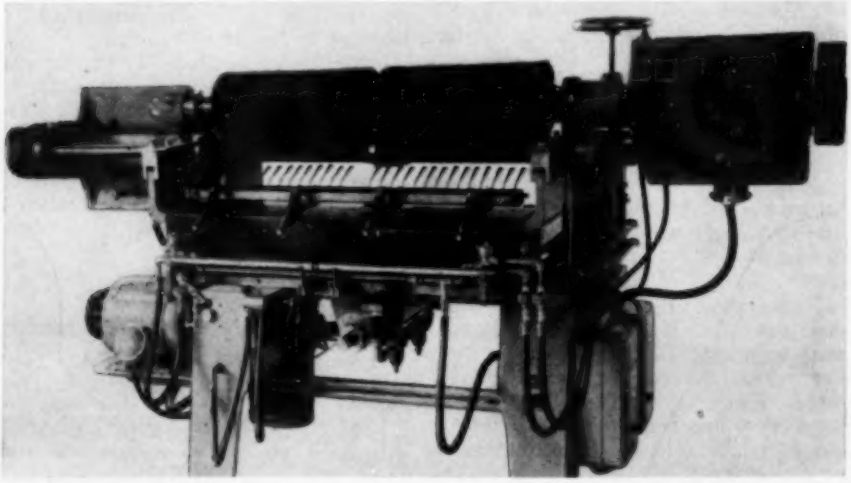
If desired, it can be machined easily, with accurate control. Imitation pearls made of polystyrene now can virtually duplicate the look of genuine pearls.

The new finish has excellent durability, adhesion to the polystyrene, and resistance to perspiration. It does not attack the polystyrene; it gives a uniform, smooth finish. The new coating is available in all standard colors, in gloss and semi-gloss.

Silverware, Instrument and Tool Finishing Machine

The Clair Model 208 Surface Finishing Machine is a new development designed to surface finish spoon handles, fork handles and similarly shaped products. Although developed for a specific use through cooperation between Clair and several large silverware manufacturers, the machine is not limited to silverware applications.

The machine allows batches of work to be transferred as units from one holding rack to another between bowl and handle operations. According to the manufacturer, this new machine,



Automatic machine for buff finishing silverware, fine instruments and small bright tools.

QUALITY
Lacquers and Finishes
for WOOD and METAL SURFACES
FURNITURE FINISHES
INDUSTRIAL LACQUERS
GOVERNMENT SPECIFICATION
COATINGS AND THINNERS
COAST LACQUERS cost less because we pass along to you the savings made possible by our immediate contact with the huge chemical plants of the Gulf Coast from which we obtain our superior raw materials at low cost. Write for information and prices.
CPL
COAST Paint & Lacquer Co. Inc.
P. O. BOX 1113, HOUSTON 1, TEXAS

with its batch-handling rack feature, considerably speeds up production and also reduces the number of rejects.

Operated by either 7½ or 10-hp. motors, the Clair Model 208 Machine has an automatic hydraulic "in" and "out" stroke which is adjustable from ¾ to 24-in. It has an air circuit which provides automatic float of buffs at any predetermined uniform pressure. The standard machine is built with a safety bar across the front which controls instantaneous opening of the rolls during loading or as an emergency measure. Among a wide variety of optional features are controls which open rolls and arrest all actuation at the completion of any predetermined number of strokes from 1 to 400.

In addition to silverware the machine is recommended by the manufacturer for surface finishing plier handles, surgical instruments, carving forks and many other curved items.

Additional details may be obtained from Clair Mfg. Co., 1008 S. Union St., Olean, N. Y.

Hot Spray Lacquer

A new hot spray lacquer that fully meets manufacturers' requirements for cabinet, case goods and general furniture finishing has been developed by Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Illinois.

Named "Wonderhot Lacquer," this new hot spray finish needs no agitation. For many applications, no rubbing is required; but if a piano finish luster is needed, it may be rubbed like any other lacquer, according to the manufacturer. The flatting agent is not affected by heat.

Available in flat, gloss, or semi-gloss, in either 35% or 30% solids, Wonderhot Lacquer will provide a clear deep finish in any desired sheen and offers the merits of time saved in preparation and application of the finish and lessened production cost. One application of Wonderhot Lacquer will generally take the place of two cold sprays, a company spokesman points out.

Air Hose Connectors

The new interchangeable and easily detachable air hose connections brought out by The DeVilbiss Co. of Toledo, Ohio, are full automatic and eliminate the need for shut-off valves when tools are being changed or cleaned. The connectors are self-locking, thus preventing any air loss when detached. When coupled with both hose and tool, the air passage is opened automatically and then is closed when the connector is uncoupled.

A ball-type latch eliminates the need

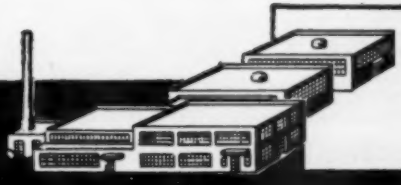
Quickly and easily connected and detached.

Inside the formula of every **RANDOLPH FINISH . . . .**

Randolph Finishes—developed over 18 years of intensive research and experience—are playing a mighty part in today's production drive. Producers of both defense and civilian goods are coming to Randolph for coatings that serve their products best. Dress up your product, give it its staunchest surface and new sales vigor with a Randolph Finish!

DEPENDABILITY
SUITABILITY
QUALITY
SERVICE

Every Randolph salesman is a technician—thoroughly experienced in his field. Discuss your finishing problems with him freely. Call on Randolph's technical resources for more dependable and economical production.



RANDOLPH
PRODUCTS COMPANY
CARLSTADT, NEW JERSEY

DOPES · LACQUERS · ENAMELS · THINNERS

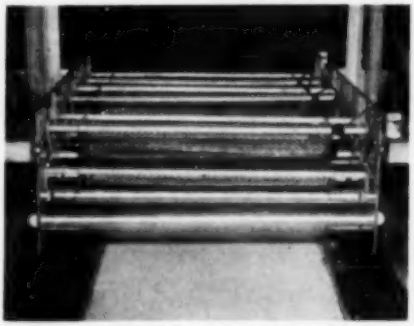
for tools in making the connection. Only a slight push is required. In disconnecting, the air pressure itself is utilized to assist in detaching the insert nipple.

The connectors are lifetime devices; they can be used again and again even when hose replacement becomes necessary. Another feature is the swivel-type coupling which allows free rotation of the stem without tangling lines.

These quick detachable connections are available for five sizes of hose ranging from ¼-in. through ⅜-in. I.D. and four quick detachable valves in ¼-in. and ⅜-in. sizes, with both male and female threads.

Applies Flock Electrostatically

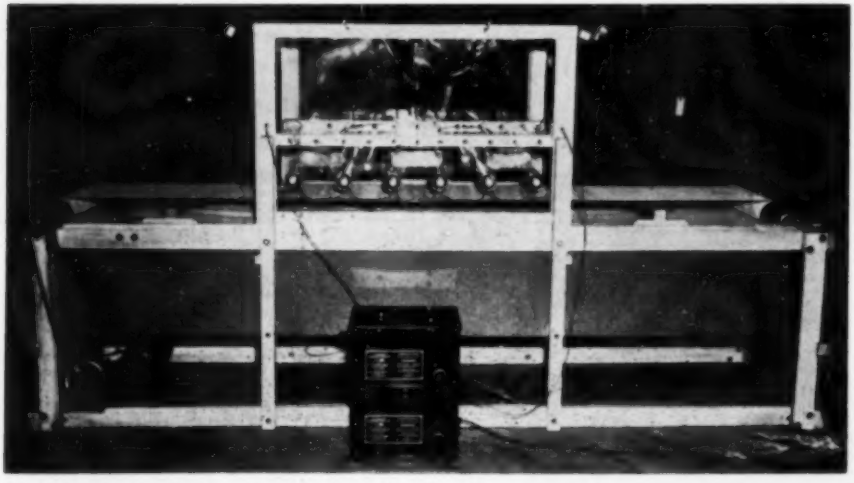
Photographs and the following portions of a letter referring to the application of flock to prepared surfaces by electrostatic equipment have been received from International Industrial Developers, Inc. (S. Carlyle Peterson, V.P.) 1 Moshassuck St., Pawtucket, Rhode Island.



A close-up end view of Lindquist flock delivery system with wide belt conveyor below.

"Mr. Theodore Lindquist developed and has applied for patents on the Lindquist Flock Delivery System. The development work was done in conjunction with this company, where Mr. Lindquist is now employed in research and development as well as sales of the flock delivery system, along with the Flisca Electrostat.

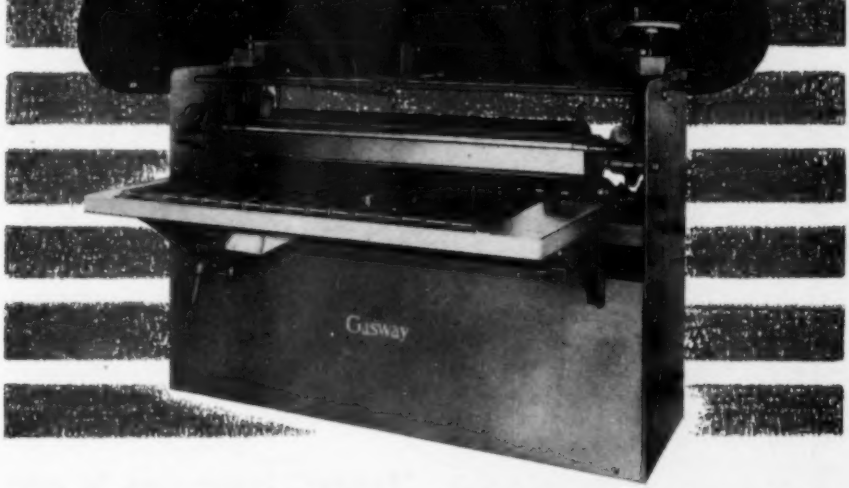
"This flock delivery system is new and unique in that the charged fibers of flock are projected in a downward direction, whereas heretofore flock ac-



Lindquist flock delivery system, powered by the Flisca Electrostat . . . with belt conveyor.

Rollacoat for economy

GET FINER—FASTER FINISHING!



The benefits to be gained by using the Rollacoat method of applying finishes and protective coatings, to practically any type of flat materials, are three-fold. In the first place coating speeds are greatly increased over those of any other method and are governed largely by how fast the coated materials can be handled or dried. Secondly, the coverage per sq. ft. per gallon is usually at least 50% greater, the only loss being the paint removed from the rolls at the end of a run. In the third place you obtain finer quality of finish due to accurate control of thickness and eveness of coat.

The applications of Rollacoating are numerous. Top, bottom and sides of practically any type of flat material, whether sheet or coil stock, can be coated by a single pass through the machine.

Special equipment for cleaning, treating, coating, drying, and rewinding strip in continuous process can be constructed to special order.

GASWAY CORPORATION

Write or wire today for the 12 page Gasway illustrated book describing Rollacoat Finishers, their possibilities and limitation.

6463 N. Ravenswood Ave.
Chicago 26, Illinois

tivated by an electric charge has been projected upward. This greatly simplifies conveyor handling of individual objects, contributing greatly to the economy of mass production, and at the same time approaches perfection in the orientation of the fibers by imbedding them perpendicular into the adhesive.

"The Flisca Electrostat which is the Swiss invention with patents applied for in this country together with the Lindquist flock delivery system are leased to customers on a yearly lease basis and are fully serviced by us. Engineering and technical assistance for production setups are also furnished."

Gasway Rollacoat Finisher

One of the latest developments in roller coating equipemnt is the Gasway Model 32B Rollacoat Finisher. The machine is a well designed, heavy duty production unit with ball-bearing construction throughout.

A feature of the machine is the fact that several accessories are available; these can be installed at the time of purchase, or they can be added to the machine at a later date.

One is a standard feed table with adjustable edge guide. A feed conveyor can be added to feed table to make it into a short belt feed unit.

A delivery table conveyor can be mounted on the rear of the machine to carry small finished pieces far enough away from the machine to permit them to drop onto a drying conveyor.

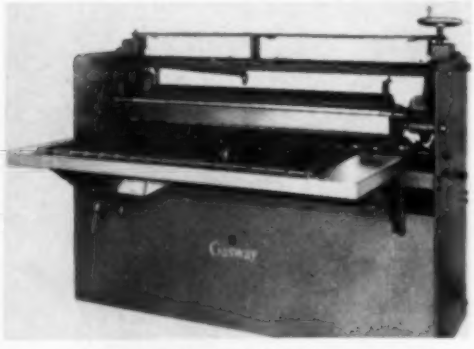
A pair of driven feed rolls can be mounted on the front of the machine in place of the feed table.

An extra long feed table with multiple drive rolls can be added for handling long and heavy sheets. A brushing unit with dust-removing fan can be added to the long feed table.

A paint circulating pump can be added to deliver paint to coating roll.

The extreme flexibility of this machine makes it an excellent basic unit around which a complete coating line can be built.

Additional information available by addressing Gasway Corporation, 6463 N. Ravenswood Ave., Chicago 26, Ill.



Gasway's Model 32B Rollacoat Finisher

"Tufcote" Sealer Easy to Sand With "No-Fil" Sandpaper

A new and easy way for furniture manufacturers to obtain toughness, scratch resistance, and clarity in wood finishes without any change in normal manufacturing procedures has been developed through the cooperative efforts of the DuPont Co. and Behr-Manning Corp., Troy, N. Y. Division of Norton Co.

These results are accomplished through use of two new products which, used together, replace the conventional sanding sealer and regular sandpaper used in finishing. The products are a clear sealer to be sold under the DuPont Co.'s "Tufcote" trade mark, and two new sandpaper items to be marketed initially by Behr-Manning Corp., under the trade-marks "No-Fil" Garnet Finishing paper and "No-Fil Durite" Finishing Paper. [*Cont'd on page 108*]

CLAREMONT

the Name that's quality—famous for **FLOCK**

RAYON FLOCK

WOOL FLOCK

COTTON FLOCK

America's No. 1 Source of Supply
Modern Manufacturing Facilities
Careful Processing Supervision
Finest Quality Materials
Standard Lengths, 1/32" and 1/16"
Other Lengths to Specifications
Rainbow Range—18 Colors
Sealed, Dust-proof Bag Shipments

"An Ounce of Flock Creates a Pound of Allure"

Write for Samples, Color Cards Instruction Manual and Prices

CLAREMONT WASTE MANUFACTURING COMPANY
The Country's Largest Manufacturer of FLOCK
CLAREMONT, NEW HAMPSHIRE

Now, with the aid of the new abrasive papers, the furniture manufacturer may, at no sacrifice in ease of sanding, and with no added operations, use a high-build sealer and obtain improved toughness and adhesion in his finish.

The idea for producing a superior finish through the combined use of the new sandpaper with a tough sealer originated in the DuPont laboratories. DuPont will manufacture and market only the "Tufcote" sealer. Not being in the sandpaper business, DuPont made the idea known to Behr-Manning. They developed the sandpaper portion of the idea to a production basis in their laboratories and production facilities. It is also expected to be available from other manufacturers of coated abrasives in the near future.

"Tufcote" Sealer is a clear, fast-drying wood sealer, very light in color. It provides excellent build in one spray coat over either close-grained or filled wood; it flows out smoothly when sprayed in the same manner as a regular sealer. After air drying or forced drying in the regular manner, it may be sanded in the usual way, using the other member of the "team", one of the special finishing papers.

The new finishing papers are similar to standard sandpapers in their backing and abrasive grains only. *They differ from standard papers in that they contain an ingredient which prevents the abraded particles from sticking to the sandpaper and shortening its life and effectiveness.* The ingredient eliminates what is commonly known as "loading" and "gumming".

No special equipment or change in present finishing methods is required in the use of these new abrasive products. "No-Fil" Garnet, a natural quarried abrasive, and "No-Fil Durite", an electric furnace silicon carbide abrasive, are available in the flexible "A" weight grades common to sealer coat preparation in standard 9x11-in. sheet form or special cut-sheet sizes.

In presenting these new companion items to the furniture and wood products field, it is felt that for the first time in a great many years, here is something really new. Intensive research and extensive field testing clearly show improved surface preparation and markedly better coated abrasive performance in sanding operations.

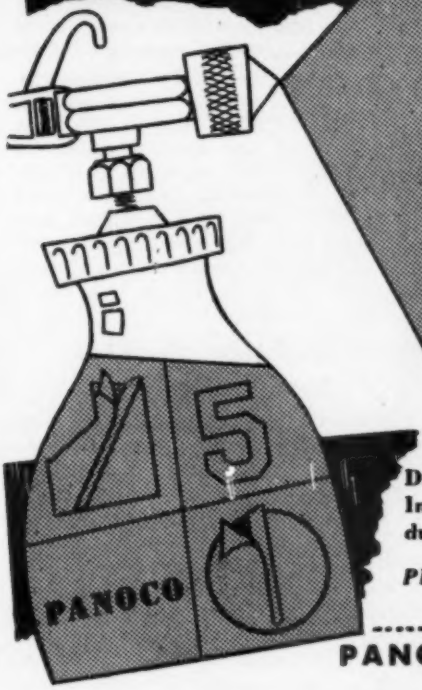
Close Fitting Metal Stencils For Code Marking, etc.

Increased code marking production of any complicated electronic device is now easily possible with Jas. H. Matthews & Co. precision stencils. In a few seconds, a complete electronic chassis can be coded for its component parts by paint spraying. Each non-corrosive stencil guarantees sustained accuracy of code marking and gives excellent service for the

Spraying code marks through metal stencil.

PANOCO *offers you...*

CUSTOM DIE-CUT
MASKING TAPE
PROCESSED FROM
SCOTCH BRAND
PRESSURE SENSITIVE TAPES
FOR QUICK, ACCURATE
MASKING OPERATIONS



Die-cut to your exact specifications. Increases efficiency! Speeds-up production! *Expedites Defense Orders!*

PHONE or WRITE FOR PRICES and SAMPLES.

PANOCO PAINT STRAINERS

To Promote Good Will!

Your customers and prospects need and appreciate PANOCO Paint Strainers. Let PANOCO Paint Strainers sell your company's name and products . . . *right at Point-of-Use!*

PHONE or WRITE FOR PRICES and SAMPLES.

PANOCO 505 Carroll St., Brooklyn 15, N. Y.

normal length of time any electronic model is in production.

Matthews precison stencils are made by specification to fit snugly over the part to be marked, regardless of its shape or size. Each code or symbol is precisely relieved from the contour-formed stencil by expert craftsmen, assuring accurate, perfectly legible reproduction. Stencil holders make it possible to spray both sides of an electronic chassis in a single operation, and eliminate the necessity of handling a "wet" stencil.

Any employee can easily spray the codes or symbols on electronic components with perfect results and with minimum fatigue . . . yet the rate of production is greatly increased over outmoded methods of marking. And when it comes to quickly assembling coded electronic parts, an unskilled worker does the job of an expert technician.

The Matthews precision stencil is not a stock item. Each stencil is engineered to fit a customer's specifications. For more complete information and literature, write to the Jas. H. Matthews & Co., 3921 Forbes St., Pittsburgh 13, Pennsylvania.

Corrosion-Resistant Coating for Detrex Degreasers

A tough, new material that has excellent corrosion-resistant properties has been developed and is now being used by Detrex Corporation, Detroit 32, Michigan, for coating the inside of its standard line of VS-800, hand-operated, solvent-vapor degreasers.

This non-porous, phenolic type coating, called Detrex FF-1, has proved to be exceptionally desirable from a standpoint of service life and maintenance. It is remarkably impervious to any dissolving effect by trichlorethylene and perchlorethylene. It is also strongly resistant to any chemical breakdown that might be caused by water-solvent mixtures, and relatively strong solutions of acids and alkalies and their vapors.

Machines coated with FF-1 have been production tested for several years under severe operating conditions without any sign of failure, showing service life comparable with that of machines fabricated from much more expensive nickel clad steel.

Should the coating be damaged by physical abuse during its service life, repair is simpler than in the case of metallized zinc coating. Also, as Detrex FF-1 is completely polymerized, is non-porous, and interlocks with the surface of the metal, any corrosion at a damaged area does not tend to spread beneath the adjacent coating.

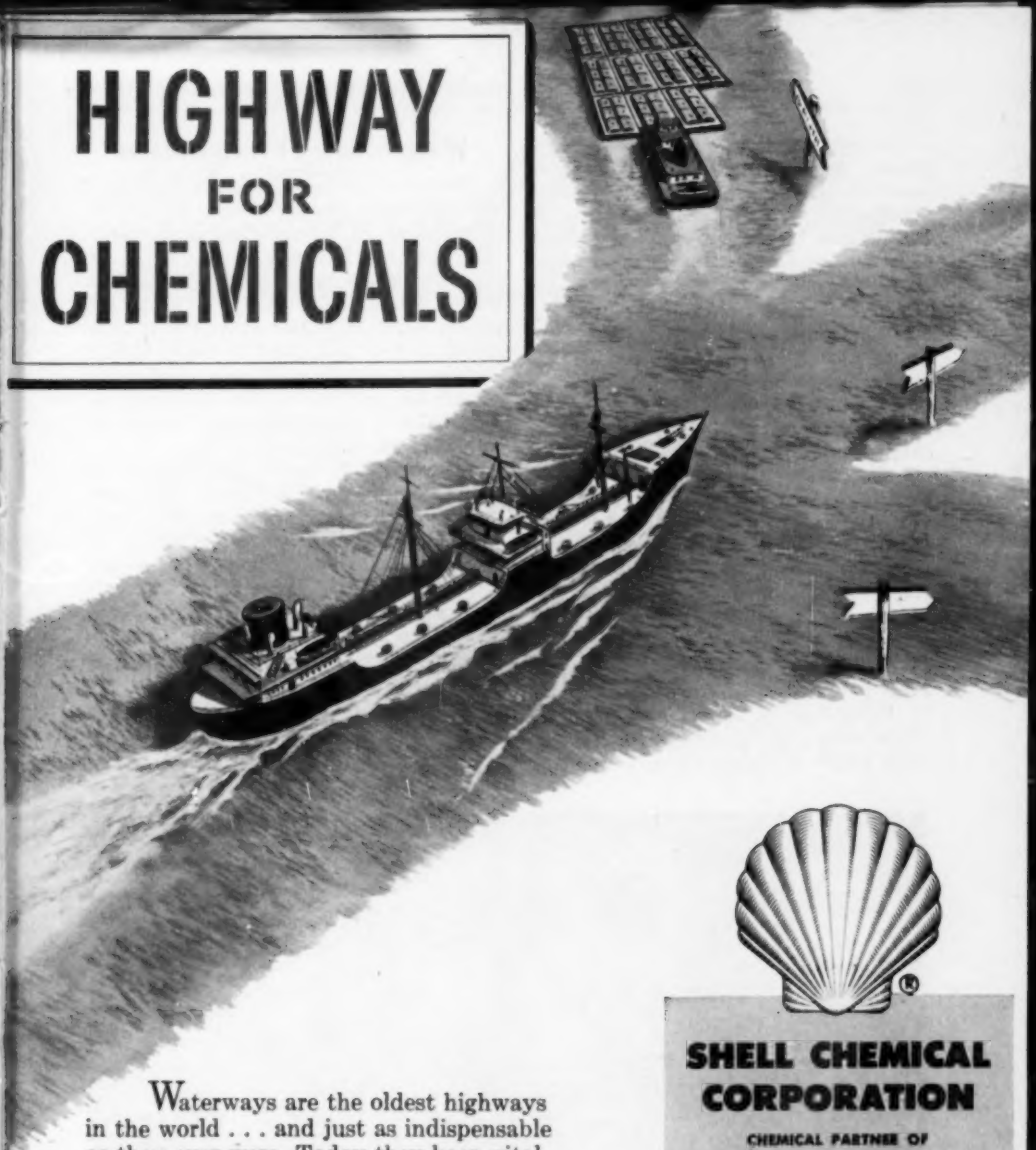
Finishes Look Like Brass, Copper, Chromium

Research in organic finishes has opened many new applications for these coatings that are of particular interest during the current shortages of many of the metals normally used for plating purposes, according to a speech recently delivered to the Rochester Branch of the American Electroplaters Society by Mr. B. F. Ames, General Sales Manager of Maas & Waldstein Co., Newark, N. J.

"The development of organic finishes that can be effectively used in place of such scarce non-ferrous metals as brass, copper, nickel and chromium is one of the most vital phases of our research work," Mr. Ames declared.

"Electroplaters and fabricators, faced with the problem of continuing to meet their customers' requirements for product appearance and durability, can find an effective solution through the use of organic finishes," Mr. Ames stated. [*To page 112*]

HIGHWAY FOR CHEMICALS



Waterways are the oldest highways in the world . . . and just as indispensable as they ever were. Today they keep vital chemicals flowing to you.

Ocean tankers for moving bulk chemicals —pioneered by Shell—and river barges supply Shell marine storage terminals located at key industrial centers throughout the country.

Facilities are so co-ordinated that bottlenecks in deliveries are eliminated *before* they happen. Result: Service—fast and dependable.

SHELL CHEMICAL CORPORATION

CHEMICAL PARTNER OF INDUSTRY AND AGRICULTURE

EASTERN DIVISION:
500 Fifth Avenue, New York 18

WESTERN DIVISION:
100 Bush Street, San Francisco 6

Los Angeles • Houston • St. Louis • Chicago
Cleveland • Boston • Detroit • Newark

IN CANADA
Shell Oil Company of Canada, Limited
Toronto • Montreal • Vancouver

"As one part of our research program," he continued, "Maas & Waldstein Co. is working closely with the automotive industry on the use of Platelustre transparent enamels on zinc die castings. The die castings are buffed to a high finish, flash-coated and passivated with bright zinc. The Platelustre coating produces a finish closely resembling any of the shades of brass, copper, bronze, or gold, if desired.

"Exceptional protection for zinc die castings and for zinc-plated steel parts can be obtained with the use of such clear coatings as Dulac Clear Universal Lacquer No. 462 and Codur Clear Synthetic Y743. Independent tests prove that these finishes withstand 800 hours' salt spray and weatherometer tests.

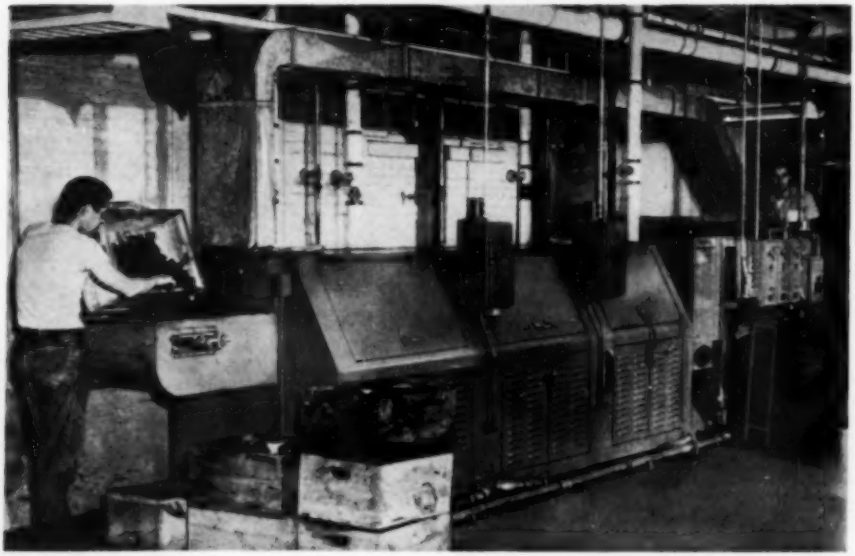
"Other developments include the use of Britelume directly over unbuffed steel for a brushed chrome effect, and of Britelume as an undercoating for Platelustre to produce finishes of very unusual appearance."

Washes Small Bakelite Parts

Manufactured by Industrial Washing Machine Corp., Dept. ST, New Brunswick, N. J., and used by Spencer Thermostat Division of Metals & Controls Corp., Attleboro, Mass., this model SK 12 x 6 washes, rinses and dries bakelite parts in volume. The machine can be heated by either steam or gas; it solves what was previously a serious problem by efficiently removing bakelite dust, chips and traces of oil from parts.

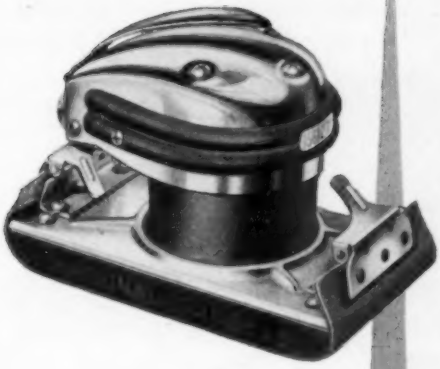
Featuring a high capacity rate of 5000 small parts per hour and proportionately high capacities for larger parts, this machine performs a 4-cycle cleaning operation. It washes, rinses twice, rinses again with fresh water and then dries the work. All bakelite chips (some of which are as fine as powder) are completely and thoroughly removed automatically.

Below: washes, rinses and dries Bakelite parts automatically.



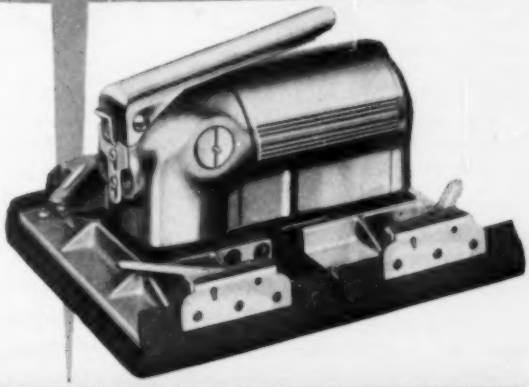
National Sanders

STRAIGHT-LINE *or* ORBITAL ACTION



National offers either orbital or straight-line action in its line of light-weight, fast, portable air sanders. Orbital action for speed and longer abrasive life . . . straight-line action for applying pattern or conforming to grain. No matter what type of sanding is most satisfactory for your needs, be sure and see your National Sander distributor. He is able to advise you impartially as to the machine that will best fill your requirements. Write the factory for details.

- ***Light-weight***
- ***Powerful***
- ***Vibrationless***



NATIONAL NS SANDERS

NATIONAL AIR SANDER, INC.

2820 AUBURN STREET, ROCKFORD, ILLINOIS

Roller Tray Infra-Red Oven

A new Roller Tray Infra-Red Oven that gives conveyorized production without conveyor equipment, is announced by the Wil-Son Mfg. Co., Dept. IF, Cloverport, Kentucky.

These ovens are used for the production of small parts and medium production of larger sized parts. They are well suited to baking of synthetic enamels and lacquer finishes, and drying of electroplated parts.

Features include asbestos insulated construction, together with heat conserving baffles at the oven entrance. All sockets are wired with asbestos wire, and each channel row is equipped with a toggle switch for individual control switching. Size of oven can be increased at any time by adding of additional oven sections. Standard oven lengths are 24, 32, 48, and 96-in. Includes complete range of ovens from shallow ovens for small parts to tall ovens for baking 18-in. high parts.

The tray has steel wheels with ball bearings for easy rolling; will support 50-lbs. of weight.

Improved Stripping Oil for Metal Coating

A new oil-stripping medium developed by Archer-Daniels-Midland Co. is said to offer important economies and improved results in the hot dip tin and terne plating industries.

Under the high temperatures at which oil stripping is commonly done, palm oil gradually decomposes and increases in body viscosity. It generally becomes necessary to replace at least 25% of the oil every two weeks in order to maintain satisfactory performance.

In contrast, the new material is said to be so stable that decomposition is negligible. After a continuous six months' test, it still retained all the original properties required of a satisfactory stripping oil. No additions were necessary except to replace the oil carried away as film on the finished product.

For further information write Frank Haas, Archer-Daniels-Midland Co., 2191 W. 110th St., Cleveland, Ohio.

Kanartex Coatings, Inc., Formerly Skinner Paint & Varnish Corp.

Kanartex Coatings, Inc., is the new name of the firm formerly known as Skinner Paint & Varnish Corp., Galesburg, Illinois.

The company also announces that it has adopted "Gay-Lux" as a brand name by which its products will be known in the future.

Speed WAR Orders on their Way . . .

WITH SILK SCREEN PRINTING

IDEAL FOR PRINTING RIGHT ON YOUR PRODUCT

- Radio Dials
- Instructions
- Instrument Panels
- Code Numbers For Assembling
- Trade Mark or Manufacturer's Name

Hundreds of other uses . . . on wood, metal, fabrics, plastics. Do the work in your shop or sub-contract it to a nearby silk screen printer.

A silk screen department costs very little to set up and pays for itself many times through faster production.

WRITE DEPARTMENT IF I-52 FOR FURTHER INFORMATION

THE NAZ-DAR COMPANY

461 MILWAUKEE AVENUE • CHICAGO 10, ILLINOIS

STILLE-YOUNG

Lacquers

All standard types of lacquers — and special formulations if you need them.

Inquire about the approved No. 6700 line of Water-white, non-yellowing Sealers and Lacquers. These materials have had good acceptance in the trade where non-yellowing is the prime requisite on light, modern pieces.

THE STILLE-YOUNG CORPORATION

Manufacturers · LACQUERS · SEALERS · FILLERS · STAINS

CHICAGO 14, ILLINOIS

Mac's

FASHION FINISHES

LACQUERS — Available in clear and opaque, for application to surfaces of all kinds. Spread easily and give good coverage. Any sheen desirable. Attractive, outstanding finishes.

SEALERS — Ideally suited as first coat materials under clear gloss or flat lacquers. Give good body and sand easily. Also, work well under varnish and enamel! Try them!

VARNISHES — None better! Whether for dull, satin or gloss effects, Mac's varnishes will be found most economical and appropriate as finishing coats on low, medium and high priced goods.

STAINS — These are stains of distinction, with an established reputation for the highest quality. We've been making them since 1875. Mac's stains can be supplied for every need.

FILLERS — The Mac's Fashion line includes the more commonly used oil paste fillers as well as the quicker drying materials of recent development. Keep abreast of the times with Mac's fillers.

PRIMERS — Mac's Fashion primers insure full coverage and absolute protection as first coaters on metal, forming firm and lasting foundations on products subject to severe treatment and abuse.

ENAMELS — For wood, metal and other surfaces, air dry or bake. Mac's Fashion enamels, properly applied, stand up under all conditions to which painted articles are subjected.

WOOD BLEACH — Mac's Fashion bleach will bleach all kinds of wood including mahogany. Dries overnight to a definite bleached effect ready to sand, and ready for the regular finishing schedule. Samples on request.

THE LAWRENCE-McFADDEN CO.

Write for Production Test Samples

7430 STATE ROAD PHILADELPHIA 36, PA.

Headquarters for Fine Finishes Since 1875

New Film Developed for Screen Process Industry

An improved carbon tissue film for photomechanical plate making has recently been developed by a well known manufacturer of finishing materials and is being tested by screen process printers, according to John W. Key, President of the Screen Process Printing Association, International.

Several years ago the manufacturer, seeing a possible need for the improvement of the method currently employed by screen process and gravure printers in making their plates photomechanically via carbon tissue, approached the screen process printing industry with a request for statistical information. Unfortunately, never having had a census or a survey, the screen process industry was unable to supply anything other than vague estimates.

Despite the lack of concrete information which would justify the effort and expense involved in researching, the company embarked on the development of a film that could be exposed in the camera, etched out directly and applied to the silk ready for printing, thereby eliminating the cumbersome and time-consuming intermediate carbon tissue steps.

This work is now at a point nearing completion. The concern's field men have been working in a number of typical screen process plants and have succeeded in evolving a practical film. While this film is now a reality, more tests and refinements must still be made, and then it must be submitted to production engineers before it will become generally available. This will take an extended period of time but indications are that the end result should be attained this year.

It is felt that this is another definite milestone in screen process history—first, because of the actual value of the method, and second, because of the fact that big business has worked with the Screen Process Printing Association, International, to evolve such an advancement.

This incident, Mr. Key emphasized, points up the necessity of having statistical information available on the screen process industry, and indicates that this is one of the big reasons the SPPA is undertaking the first national census and survey early this year.

PAINT STRIPING TOOL
NEW EYE APPEAL FOR YOUR PRODUCT—LITTLE OR NO LABOR COST!
Amazing new Paint Striping Tool makes it easy to do expert striping. Paints straight, curved, circular or evenly spaced parallel lines simply and easily. Simply fill Tubular Glass Paint Fountain with paint or lacquer and Knurled Wheel Tip feeds paint evenly. Tips interchangeable — 1/64", 1/32", 3/64", 1/16", 5/64", 3/32", 1/8"—jaws split apart for easy cleaning.
DEALERS—MASTER PAINT STRIPING TOOL packed in display cartons of 1 doz. Fast, profitable seller. Write for illustrated circular, discounts.
Use For STRIPING
• FURNITURE
• TOYS
• BICYCLES
• BOATS
• SCOREBOARDS
• LAMPSHADES
• AUTOS
• SIGNS
• CERAMICS AND ALL PAINTED OBJECTS
WENDELL MFG. CO.
Dept.9A,4234 N.Lincoln
Chicago18,Illinois

Cleans Aluminum Without Leaving Residue

A non-foaming, non-corrosive, non-etching aluminum hot-tank cleaner that rinses quickly and completely with no tendency to bake on or leave a powdery residue on the cleaned aluminum is the newest addition to the family of Turco Products Inc., Terminal Annex 2649, Los Angeles 54, Calif. Formulated to appeal to the aircraft industry, the new product is called "Aviation."

Advantage of the many benefits of agitation can now be taken with non-foaming Turco "Aviation." Agitation of aluminum cleaners speeds production by removing the soil-saturated

Plated Effect Coatings

- NO DYES OR BRONZE POWDERS USED
- NON SETTLING — NON JELLING
- SUPERIOR ADHESION TO PRACTICALLY ALL SURFACES
- EXCELLENT LUSTRE & REFLECTIVITY.

ANOTHER NATIONAL EXCLUSIVE

NATIONAL LACQUER & PAINT CO., INC.
7415 S. GREEN ST. • CHICAGO 21, ILL.

SEND FOR FREE BULLETIN

TOMORROW'S Products Tested TODAY

A service to aid industry in producing longer-lasting and better-looking products. Quick predetermination of durability and permanency by actual exposure test in South Florida. Write us today for full information.

SOUTH FLORIDA TEST SERVICE
EST. 1931
4201 N. W. 7th St. Miami 34, Fla.

solution from the vicinity of the soiled metal. Furthermore, agitation exerwith the strength of steel and can be effect which aids in the removal of loosened soil. "Aviation" may be used advantageously with any means of obtaining vigorous circulation of the cleaning solution.

Aluminum cleaned with "Aviation" is completely free of powdered residue and is ready for further processing immediately.

"Aviation," which meets the corrosion requirements of MIL-C-5543, quickly removes all types of foreign matter—even hard-to-remove etching-type marking ink. Especially designed for use on reactive metals such as aluminum, magnesium and their alloys, "Aviation" may also be used on many other metals. After dissolving quickly in hot water into a clear stable solution that will not sludge or salt out, "Aviation" cleans thoroughly and rapidly during a long tank life. It will not etch or darken even a highly polished aluminum.

Random Comment on the Industrial Scene

(Continued from page 8)

and 20% copper. These sheets combine the corrosion resistance of copper flash bake of 45 seconds or a force air drawn or otherwise deformed without danger of separation of the constituent metals.

* * *

Rubber Output Up. A technique that will boost production capacity of American rubber by 26% is being used at the world's largest rubber plant at Institute, W. Va., according to W. S. Richardson, president of B. F. Goodrich Chemical Co.

The process, using sugar and other activators, was developed by B. F. Goodrich Chemical, which operates the plant for the Government, to speed the manufacture of rubber, Richardson revealed. He said the new formula is the first to be applied to the production of "hot" American rubber, which is made at 122° F. as contrasted with cold rubber made at 41° F.

"Hot" rubber, which accounts for a substantial percentage of the current American rubber output, is in great demand for shoes, industrial materials and mechanical goods.

Metal, too, Must Be Washed!

Yes, not just on Mondays, but every day of the week, 24 hours a day, metal cleaning problems confront the nation's industries.

Too often, responsible personnel attempt to dismiss them by resorting to so-called "cure-alls".

Unlike the old-fashioned wash tub, metal cleaning equipment must be designed for a particular product and a specific process.

Whether your problem concerns between-operations cleaning or paint preparation, insist on washers especially tailored by—

17908 Ryan Road
Detroit 12
Michigan

peters-dalton
INCORPORATED

Industrial FINISHING Editorial

Make a Decision! Do Something!

Management may realize that its finishing system and equipment are outdated, expensive to operate and do not produce a good finish, economically, as they should. Members of management do a lot of talking, waiting and hoping for the correct answers to appear. If a diversified line of products is to be finished the dilemma becomes more obscure and uncertain.

Some men are pessimistic perfectionists; they fear making a mistake; afraid they may pay too much for something less than the best. As a consequence, old methods and old equipment continue in service. The stock excuse offered is that "in these uncertain times one never knows just what new products one may have to finish next month or next year". This could go on indefinitely.

There is no perfection. Where there is so much uncertainty, call in a reputable firm of finishing engineers to consider the present production setup and any reasonable change in products in the forseeable future. Then accept their advice and install a system and equipment that are adequate for the present, with sufficient margin for reasonable changes in production in the future. At least you will be accomplishing something. Indecision accomplishes nothing positive; it's all pessimistically negative.

"Well, I guess it's all right as long as he's doing it on his lunch hour."

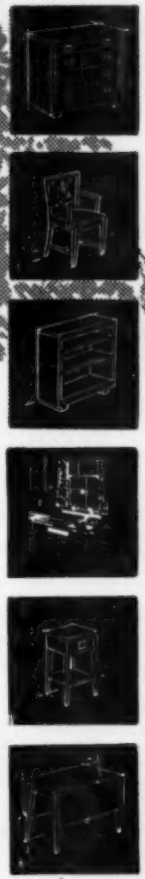
More Furniture to Have Light Color Finishes

★ During the past few years the trend in fine furniture and cabinet finishing has been toward the lighter colors, such as the "wheats" and sand tones. I feel sure that in the next market (January) we will see more light and natural finishes than ever before. Among the most popular finishes of recent years, and still gaining favor, is knotty pine finished in

★ *Guest Editorial . . . Many readers can write an excellent editorial—two or three paragraphs that present a timely suggestion or valuable idea which will stimulate thought on a live subject. The Editor welcomes guest editorials and pays for those used.*

PA 2063

(Synthetic Undercoat)



Opens new roads for using fir and other marginal woods!

Excellent filling and holdout properties are two of the advantages which make United's PA 2063, synthetic undercoat, ideal for use on fir and other open grained marginal woods.

When coated with PA 2063 and then covered with a synthetic enamel or other top coat, these woods give the appearance of, and can be used as gum woods.

PA 2063 is easily sanded, dries quickly, and requires only one coat. It holds down the wood grain while preventing a glossy top coat from sinking in.

A generous working sample of PA 2063 is yours for the asking. Get yours today.

PAINTS • SYNTHETICS UNITED LACQUERS • ENAMELS

United LACQUER MFG. CORP.

LINDEN, N. J. EVERETT 52, MASS.

PHILADELPHIA 19, PA.

"Wood Graining" ADDS Eye Appeal

American Graining Plates are photographic reproductions of fine woods.

AMERICAN RICHWOOD PRODUCTS CO.

Graining Plate Division

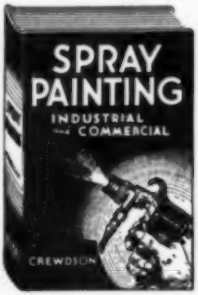
104 E. Mason St., Milwaukee 2, Wis.

—SPRAY PAINTING—

Industrial and Commercial

Contains 169 pages. Fully illustrated. Cloth. Price.....$2.00

This new book covers the fundamental principles of spraying technique, together with the latest developments and practices of this craft. Covers common paint pigments, paint extenders, enamels, oil and spirit varnishes, shellac, lacquer, synthetics, all types of modern air guns, spraying technique, spraying standard materials, spraying defects, their cause and remedy, flock and suede finishes, striping and lettering, pearl lacquer finish, also automatic spraying, electrostatic spraying, agricultural spraying and automobile spraying. Ends with the sprayers "Ten Commandments."



INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

various light shades all the way from a light honey-color to a grayish light brown tone.

Another wood finish that has been in great demand is Korina wood finished in light color. Because of the light color of the wood many beautiful light finishes can be produced. One of the most attractive finishes for this wood is a very light warm tan that is heavily high-lighted around the edges of the drawers, etc., with a light brown glaze or shading stain. Another popular finish for Korina is an off-white, filled with a light colored filler.

Oaks in various colors ranging from a light tan to lime oak will be much in evidence in the future, as in the past. Bleached walnuts and mahoganies are in demand and will be shown in many new light tones. There are many other light wood finishes, such as honey toned and gray toned elm and ash. These have been in great demand and will continue so through the next market, I feel sure. —*H. W. Chester.*

Better Values in Finishes More Sales in 1952

★ Increasing recognition by both manufacturers and the government that *greater use of paint for protective purposes is one of the best long-range economy measures,* is a factor that will help create a 20% boost in the sales of paint and related raw materials during 1952.

Looking back at the year just ended, 1951 represented one of the greatest awakening periods for the small manufacturer. During this period he experienced fierce competition and, as a result, he turned to suppliers for specific suggestions and recommendations for improving his product.

He became much more aware that appearance plays a big part in selling his product. Perhaps before, he had

BARRETT "FILWHIRL" ENAMELERS make easy work of many difficult coating problems

The Barrett Centrifugal Enameler

The Barrett "Filwhirl" Centrifugal Enameler provides a sure, clean and economical method of applying enamel or lacquer to parts or products that can be rotated. It saves coating material, time and expense. It is designed for bulk handling, and speedy production requirements.

It has proven highly successful in coating helical springs, clips, clasps, zipper parts, bead and link chain, toys, automobile and luggage hardware, misc. metal stampings, castings, etc. Good results are obtained with japan, lacquers, varnishes, paints, waxes. No drips or fatty edges.

Furnished in spindle post, fixed bowl, and carrier types, in several capacities. Safety features included and auxiliary equipment is available.

Send a few representative samples to be processed and submitted for your examination.

THE LEON J. BARRETT COMPANY
Designers and Builders of Centrifugal Machinery
1703 GRAFTON ROAD WORCESTER 1, MASS.

thought of finish in terms of paint—just paint. Now, however, he looks at a finish from the standpoint of composition, durability, gloss, smoothness, and resistance to scuffing, soap solutions, alkalis, kitchen fats, oils and marring.

The individual manufacturer also became more conscious of the fact that plastics, used as a base for his products, or as a coating for his products, presented tremendous appeal to the consumer. The demands of these manufacturers, in turn, stimulated research in raw materials and formulations which now make it possible to coat items hitherto impossible, such as cellulose acetate and butyrate acetate.

Paint researchers have developed plastic enamels that approximate the drying and finishing speeds obtainable only with lacquers. They also have made coatings which, with a flash bake of 45 seconds or a force air dry of approximately 150° F. for three minutes, give the same result as enamels that formerly had to be baked at a temperature of 300° F. for 10 to 15 minutes, or force air dried at 150° F. for eight hours.

The year also saw wider application of newly developed multi-color enamels for finishing manufactured products of a wide variety, as well as home interiors. Making possible the application of two or more colors in a single coat, the multi-coat enamel is economical because it eliminates several steps from standard finishing operations.

Shortages of certain raw materials continue to constitute the paint industry's biggest problem. Among these "short" materials are: phthalic anhydride, titanium and toluol.—*Saul Cantor, V. P. of United Lacquer Mfg. Corporation.*

NON-INJURIOUS **ELECTRO** NON-INFLAMMABLE

COLD STRIPPER

FASTEST *in Action* **LOWEST** *in Price*

WRITE FOR TESTING SAMPLE OR ORDER
5-GALLONS AT DRUM PRICE

Specify whether dip or brush type is desired

Allied Finishing Specialties Co.

2641 W. Grand Ave. • Chicago 12, Illinois

Barker Chemical Co. Offices Now in New Building

Offices of the Barker Chemical Co., manufacturer of thinners and lacquers, are now located in a new modernistic office building across the street from the company's new plant . . . . . 700 E. 138th St., Chicago 27, Ill. (Telephone, Waterfall 8-5000). The new office building (about 40x60-ft.), is a one-story structure, air conditioned and well lighted. The new plant is located effectively for transportation facilities by both land and water.

Manufacturing and storage facilities, exclusive of outside tanks, are in four one-story buildings that have a floor space of about 12,000-square feet.

The Barker Chemical Co. produces general purpose thinners and a number of specially formulated paint and lacquer thinners for the industrial trade. Thinners are made up of mixtures of solvents in measured proportions that have been carefully determined by the company's chemists to fit the specific requirements of certain paints, varnishes, lacquers and synthetic coating materials used, under various conditions, by customers.

Solvent Degreasing Sales Highest Since 1947

The increase in the rate of solvent degreasing equipment sales for 1951 is four times that of 1947, according to figures made public by the Detrex Corporation, Detroit 32, Michigan.

This rapid increase in the adoption of degreasing as a metal cleaning process by both civilian and defense industries is due, according to a Detrex spokesman, to the over-all speed and efficiency of degreasing in all forming, fabrication, and finishing operations.

To cover the pyramiding demands for trichlorethylene degreasing solvent supplies, further increases in solvent production are scheduled by Detrex for 1952.

New Compounds Will Help Forestall Solvents Crisis

Saul Cantor

In the event grain becomes a more critical commodity in 1952, the nation's productive capacity will not suffer from a shortage of solvents as it did during World Wars I and II, it was forecast in a year-end statement by Saul Cantor, vice-president of the United Lacquer Mfg. Corp., Linden, N. J. Mr. Cantor pointed out that the development of new chemical chains of solvents, making possible the use of combinations of new resins and alkyds, will help virtually forestall a solvents emergency like that of the two world wars.

"These resins and alkyds, made from petroleum products previously considered of no value, have resulted in compounds far more durable and chemically resistant than ever before," Mr. Cantor added.

Predicting that 1952 will be a "banner year" for the paint industry, he said that sales of paint will jump 20%.

John R. Cromb, Jr., Joins The Harrison Paint & Varnish Co.

Mr. John R. Cromb, Jr., of Marietta, Ohio, has joined the technical staff of The Harrison Paint & Varnish Co., Canton, Ohio.

Mr. Cromb was formerly Chief Chemist of a well known manufacturer of finishing materials. His association with the former concern dates back to 1939, with the exception of military service rendered with the Chemical Corps, assigned to the Air Forces from which he was separated with the grade of Major.

Patching Wood Finishes; Free Book Offered

Detailed practical instructions that explain quick easy methods for patching, repairing or fixing up damaged places in fine wood finishes are included in a new 16-page booklet compiled by experts and published by Star Chemical Co., Inc., 4500 W. Cermak Road, Chicago 23, Ill.

Materials and tools needed for doing this work skillfully, economically and rapidly are listed in the book. Pages (5½x8½-in.) are bound within attractive grained covers lettered in black and green.

CHEMISTS

Lacquers • Enamels

Stains • Fillers

Here is your opportunity to join the Chicago area laboratories of one of America's largest and most progressive industrial finish firms with an important position offering real income opportunity and pleasant working associations. Of course, our requirements are high—we need men of wide and specialized experience who are eager to advance in their field—men of initiative, character and imagination who also are capable of directing the work of others. You will like it with us. If you are qualified, tell us about yourself: your education, your experience, your business record, your family status—everything you would want to know if you were in our position. Our own men know of these opportunities. Your letter will be held in confidence. Address IF-861, care Industrial Finishing, Indianapolis 4, Indiana.

Sales Manager WANTED for Industrial Finishes

Here is an unusual opportunity for a 30 to 40 year old man to supervise and expand a sales force for a nationally known company. Practical knowledge of product finishes desirable. Also experience in sales direction, preferably as district manager or assistant to sales manager.

There is a good future in this strong, progressive company for the right man, who will operate out of main offices in New York City. Attractive retirement and insurance benefits. Present employees know of this opening. All replies held confidential. Write in care of

RICKARD AND COMPANY, INC.
11 EAST 36th Street, New York 16, N. Y.

Metal Dipping Baskets

Metal baskets, racks, dippers, strainers and containers for various jobs in connection with cleaning and finishing metal parts and products are illustrated and described in free bulletins recently published by the manufacturer, Hoffman Co., 43 N. Penn St., York, Penna.

Hot Spray Folder Free

A new folder entitled, "Finishing Military Items With Hot-Spray Lacquer at Lowest Capital Cost", prepared and published by Hercules Powder Co., Inc., Wilmington, Dela., contains information of interest to most industrial finishers. Copies of the folder are free.

Oakite Representative Receives Distinguished Service Award

J. W. Haines, technical service representative of Oakite Products, Inc., manufacturer of industrial cleaning and allied materials, is shown receiving the D. C. Ball Award for Distinguished Service, from John A. Carter, Oakite president, as sales manager Frank L. Oldroyd looks on.

J. W. Haines receives D. C. Ball Award.

The award, in the form of a bronze plaque, will be presented annually to the member of the firm's nationwide field organization adjudged to have rendered the most outstanding service to industry during the year. Presentation of the award, which is given in memory of David Cliffton Ball, pioneer in industrial cleaning procedures, founder of the company, and chairman of its board of directors until his death last year, was made at the December technical-sales conference of Oakite field representatives held at the Hotel Statler in New York.

Stainless Steel Coating

Information and illustrations about the merits and uses of new Stainless Steel Coatings, for brushing and spraying on metal surfaces, are revealed in a 4-page, 2-color folder sent out by Steelcote Mfg. Co., 3418 Gratiot St., St. Louis 3, Mo.

CLASSIFIED ADVERTISING

The rate on ads appearing in this department is $1.00 per line of 6-pt. light face type, per insertion. Minimum charge, $5.00. Ads set in 8-pt. extra bold face type cost $2.00 per line, per insertion. Regular display advertising rates apply on fractional page display ads running in this department. Rate card on request.

POSITION WANTED.

Young finishing superintendent desires permanent position with progressive company. 20 years' experience with all types of organic finishes. Baking enamels, lacquers, wrinkles, synthetics. Expert on spraying, dipping, color matching, conveyors, baking equipment, cleaning, Bonderite, graining. Extensive experience on busses, trucks, cabinets, metal furniture, outboard motors, jewelry, pearlizing, hot lacquers. Capable complete charge, scheduling, training, labor relations, high production, low costs. Handle any size department. Address IF-862, care Industrial Finishing.

FINISHING FOREMAN WANTED.

Manufacturer in Pennsylvania requires expert finisher on wooden cabinets and furniture. Capable of handling large finishing department and at least 100 men. Must have knowledge both technical and practical in all finishing phases. Good salary. In reply give full and complete details and references. Address IF-856, care Industrial Finishing.

FINISHING FOREMAN WANTED.

Radio cabinet plant requires thoroughly experienced finishing room foreman. Only those accustomed to quality plus high speed production need apply. Give full resume, references in first letter. Excellent opportunity for right man. Address IF-863, care Industrial Finishing.

CHEMIST WANTED.

Chemist with factory experience on clear and pigmented lacquers, stains and enamels. State age, previous experience and salary expected. Address IF-864, care Industrial Finishing.

PAINT SHOP SUPERINTENDENT WANTED.

Leading producer of home appliances located in small midwest town needs steady, reliable, thoroughly experienced finishing foreman who is capable of becoming paint superintendent within a few months. Must know metal finishing, metal cleaning and treating, paint spraying, sludge collection, equipment, maintenance and conveyor schedule. Job requires first-class man and pays accordingly.

Please give full information on past experience, employment record, personal references and salary required, in first letter. Replies kept confidential if you desire. Address IF-857, care Industrial Finishing.

B. S. CHEMIST WANTED,

Or Chemical Engineer, experienced in formulation of organic protective coatings for development of Industrial finishes. Excellent opportunity for advancement. In reply give detailed personal data, educational background and formulation experience. Write or phone: George Neumann, Jones-Dabney Co., 1481 S. 11th St., Louisville 8, Ky. Phone Magnolia 6900.

CHEMISTS WANTED.

Excellent opportunity is extended to two B. S. Chemists or Chemical Engineers, one experienced in the formulation of industrial enamels and the other sufficiently experienced and qualified in the formulation of nitrocellulose lacquers to be a group leader. Please send a resume of formulation experience, academic training and personal facts. Lower mid-west location. All replies to be held strictly confidential. Address IF-837, care Industrial Finishing.

INDUSTRIAL FINISHES SALESMAN WANTED.

Attractive opportunity for experienced man with some active accounts to take over established territory in northern Illinois and southern Wisconsin. Prominent midwest manufacturer making complete line of lacquers, enamels, varnishes and approved government specification finishes, offers full cooperation to right man. Address IF-865, care Industrial Finishing.

INDUSTRIAL EQUIPMENT SALES ENGINEER.

Experience in this line mandatory. CIRCO Vapor Degreasers. Vapor Degreasing Solvents. Write TOPPER EQUIPMENT CO., Matawan, N. J.

SALESMAN WANTED

To represent fast growing Chicago Industrial Paint Manufacturer to sell production finishes in Northern Indiana, Illinois and Metropolitan Chicago. Replies held confidential. Address IF-829, care Industrial Finishing.

SALESMAN WANTED.

Pratt & Lambert's expansion program requires industrial salesmen for Cleveland, Cincinnati, Philadelphia and surrounding territories. Write Industrial Sales Division, PRATT & LAMBERT-Inc., Buffalo 7, N. Y.

SALESMAN FOR PEARL ESSENCE.

Wanted to represent us in sales of Pearl Essence, an experienced lacquer salesman who can intelligently discuss the application and uses of the product. Headquarters New York City. Write in detail and an interview will be arranged. Address IF-866, care Industrial Finishing.

SALESMEN WANTED.

Well established N. Y. Mfr. desires experienced Industrial Finishes Salesmen to cover a few remaining protected territories in following areas: New England; Midwest; Atlantic Coast states. Full line, excellent quality, complete laboratory facilities, prompt deliveries. Competitive prices, high commission for volume producer. Write ADELPHI PAINT & COLOR WORKS, Ozone Park 17, N. Y.

FOR SALE.

Two insulated ⅜-in. steel plate Bonderizing tanks 4-ft.x4-ft.x10-ft. Gas fired with 3 two-inch burners. 850-gallon capacity each. Perfect condition. Address IF-867, care Industrial Finishing.

DeVILBISS AUTOMATIC ROTARY WATERWASH PAINT MACHINE FOR SALE.

Work holders consist of 10 spindles 6½" diameter, equally spaced around 48" diameter rotating circle. Four adjustable spray guns coat surfaces. Used for U. S. Navy Ordnance shell contract. Good condition. Easily adaptable to other fast, automatic finishing if desired. Contact H. W. Jenzer, Prod. Mgr. BETTER PACKAGES, Inc., Shelton, Conn.

WANTED TO BUY.

Will buy your dirty Thinners and Solvents. Send samples or letters giving approximate contents and solids. Address THE JOHANN CO., 8547 S. Ashland Ave., Chicago, Ill.

FORD CUPS

THE VOL-U-METER COMPANY
Buffalo 16, New York

INDEX *to Advertisers*

Advance Paint Co. ..... Third Cover
Allied Finishing Specialties Co. 124
American Richwood Products Co. 122
Atlas Powder Co. 12

Barrett Co., Leon 123
Barrett Varnish Co. 75
Baughn Chemical Products Co. 83
Bede Products, Inc. 1
Behr-Manning Corp. 27-67
Better Finishes & Coatings, Inc. 89
Beverly Mfg. Co. 80
Burdett Mfg. Co. 6

Capitol Machine Co., The 20
Carborundum Co., The 14-15
Carl-Mayer Corp., The 30
Claremont Waste Mfg. Co. 107
Classified Advertising 126
Coast Paint & Lacquer Co., Inc. 101

Day & Co., James B. 79
DeBurgh Conveyors 86
Despatch Oven Co. 11
Detro Mfg. & Sales Co., Inc. 44
Detroit Surfacing Machine Co. 59
DeVilbiss Co., The 46-47
Dolan & Co., Inc., V. J. 5
DuBois Co., The 9
Du Pont de Nemours & Co., E. I. 64-65
Duralac Chemical Corp. 52

Egyptian Lacquer Mfg. Co., The 51

Fostoria Pressed Steel Corp. 22-23

Gardner Laboratory 30
Gasway Corp. 105
Grand Rapids Varnish Corp. 2

Hercules Powder Co. 73
Holland & Sons, Inc., J. 84
Hygrade Food Products Corp. 58

Industrial Chemical Products Co. 33
Interchemical Corp. ..... Second Cover
Iridescent Pigment Corp. of America 83

Kirk & Blum Mfg. Co. ..... Back Cover
Klem Chemicals, Inc. 31
Koch & Sons, Inc., George 77

Lanly Co., The 37
Lawrence-McFadden Co. 116
Lilly Varnish Co. ..... Front Cover
Lowe Brothers Co., The 38-39

Maas & Waldstein Co. 55
Manufacturers Processing Co. 44
Mearl Corporation, The 19
Miracle Paint Rejuvenator Co. 84

National Air Sander, Inc. 113
National Lacquer & Paint Co. 118
Naz-Dar Co. 115
Neilson Chemical Co. 29
New York Woodfinishers Supply Co. 96
Nikolas & Co., Inc. G. J. 85

Oakite Products, Inc. 28

Panco 109
Perfection Paint & Color Co. 93
Peters-Dalton, Inc. 119
Potter Paint Co. 82

Randolph Products Co. 103
Ransburg Electro-Coating Corp. 13
Reliance Varnish Co. 71
Rinshed-Mason Co. 21
Rockford Varnish Co. 87

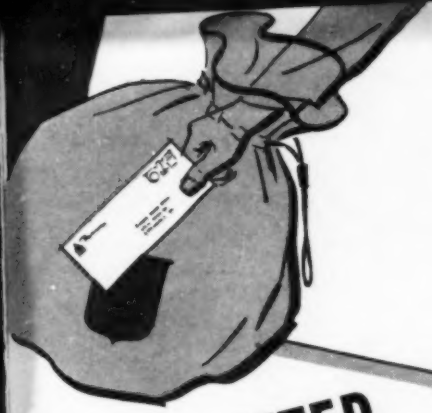
Schaefer Varnish Co. 91
Shell Chemical Corp. 111
Sherwin-Williams Co., The 16-17
Snyder Bros. Co. 78
South Florida Test Service 118
Spe-de-Way Products Co. 81
Spruance Co., The Gilbert 69
Standard Coating Corp. 8
Standard-Toch Chemicals, Inc. 53
Star Chemical Co. 81
Stille-Young Corp., The 115
Strathmore Products, Inc. 57
Sundstrand Machine Tool Co. 63

Torit Mfg. Co. 35
Thompson & Co. 95
Topper Equipment Co. 45
Tousey Varnish Co. 10

United Lacquer Mfg. Corp. 121
U. S. Paint, Lacquer & Chemical Co. 97

Varnish Products Co. 99
Vol-U-Meter Co. 127

Watson-Standard Co. 61
Wendell Mfg. Co. 117
Wilson-Imperial Co. 7
Wil-Son Mfg. Co. 43
Young & Bertke Co. 18



Advance Paint Co.
601 Kentucky Ave.
Indianapolis 7, Ind.

The LETTER of the MONTH . . .

Selected from the ADVANCE mail bag this month

"This will acknowledge receipt of your sample color panels and also your letter with attached specifications of finishing procedures.

"We are very well pleased with these samples and for the service which you have rendered us. We are using these samples as our color guide samples for the production of our cabinets with our various suppliers.

"We thank you kindly for your courtesies and efficient service and hope by this means you will be favored with additional orders for your material from our various cabinet suppliers."

Yours very truly,

*Authentic: Verification on request.

Advance PAINT COMPANY

MANUFACTURERS OF INDUSTRIAL FINISHES

Many KIRK & BLUM Industrial Ovens, although designed and built to specifications, are shipped completely assembled and tested, ready to operate. Once "spotted" in your plant, they can be connected and in operation in a few hours, saving time, expense and confusion.

Illustrated is a representative group recently shipped to well known industrial firms.

From left to right: core-mix drying oven. Two moisture evaporation ovens for chemical powders. Moisture removal oven for carbon electrodes. A conveyorized oven for drying insulating varnishes.

For information or literature on any of these products write The Kirk & Blum Mfg. Co., 3131 Forrer St., Cincinnati 9, Ohio.

KIRK AND BLUM
INDUSTRIAL OVENS

• Industrial Ovens • Fan Systems for Various Industries • Dust Collecting Systems in Metal Industries.